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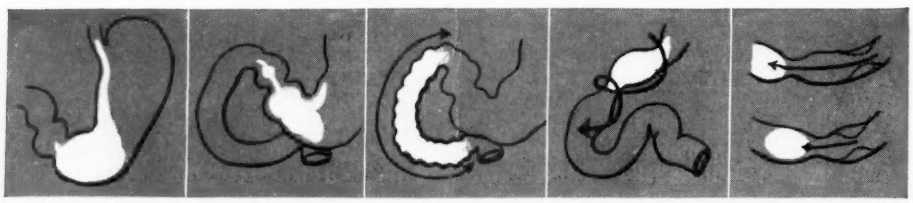

Food Breakdown | Pyloric Dilation | Duodenal Churning | Spiral Propulsion | Rapid: Slow Peristalsis

Kneading Action | Pendulous Movement | Villi Mixing | Ileocecal Dilation

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Table of Contents

DECEMBER, 1955
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Index to Volume 108 369

ORIGINAL ARTICLES

Transfusion Therapy—Progress and Problems,
1. Clinical Aspects. Kurt Stern, M.D., Chicago 315
Cardiac Arrhythmias, Their Prognostic Significance in Recent Myocardial Infarction. Morris Binder, M.D., and Maurice W. Sbertoli, M.D., Evanston 321
Panel on School Health and the Family Physician—
Health of School Children, George L. Drennan, M.D., F.A.A.P., Jacksonville 325
Accident Prevention in Childhood, James B. Gillespie, M.D., Urbana 327
The Approach of Organized Public Health with Particular Emphasis on Relationships, Edward M. Thompson, M.D., Clinton 330
The Role of the Physician in the Pharmaceutical Industry, (Seminar), Irwin C. Winter, Ph.D., M.D. 334
The Extent and Depth of the Retrolental Fibroplasia Problem, Arlington C. Krause, M.D., Chicago 337
Massive Inversion of the T Wave (Cook County Hospital Case Records) Edwin E. Goldberg, M.D., Harold B. Shrifter, M.D., and L. Feldman, M.D., F.A.C.P., Chicago 341

PATHOLOGY CONFERENCES

1. Friedrich's ataxia complicated by chronic fibroplastic myocarditis, and
2. Perforation of a peptic ulcer of the stomach and sudden death, Edwin F. Hirsch, M.D., Chicago 345

EDITORIALS

Creative protein 348
Pathologic diagnostic service 349
A.M.A. study conference 349
New honors for Dr. Telford 350
Governor vetoes proposed revision (Senate Bill 247) of the Coroners Act of 1874 351
Compensating the faculties of medicine 353
Richard J. Graff, M.D. received citizens' award 354
Medicine on postage stamps 354
Doctor-hospital relationships 354
The Month in Washington 34A
Book Reviews 42A

MEDICAL ECONOMICS

Some Economic Aspects of Health Resorts, Frederic T. Jung, M.D., Chicago 355

THE P.R. PAGE 358

CORRESPONDENCE

Clinics for crippled children listed for January 360
Midwinter Seminar in Ophthalmology and Otolaryngology 360
American Board of Obstetrics and Gynecology 361
American Academy for Cerebral Palsy Officers 361
Notice of V Congress of Pan American Medical Women's Alliance . 361
Northwestern University Medical School in Radiation Physics 361
Intestinal Research Institute 361
Officers of Chicago Council of Child Psychiatry 362
Central Society of Nuclear Medicine 362

NEWS OF THE STATE 363

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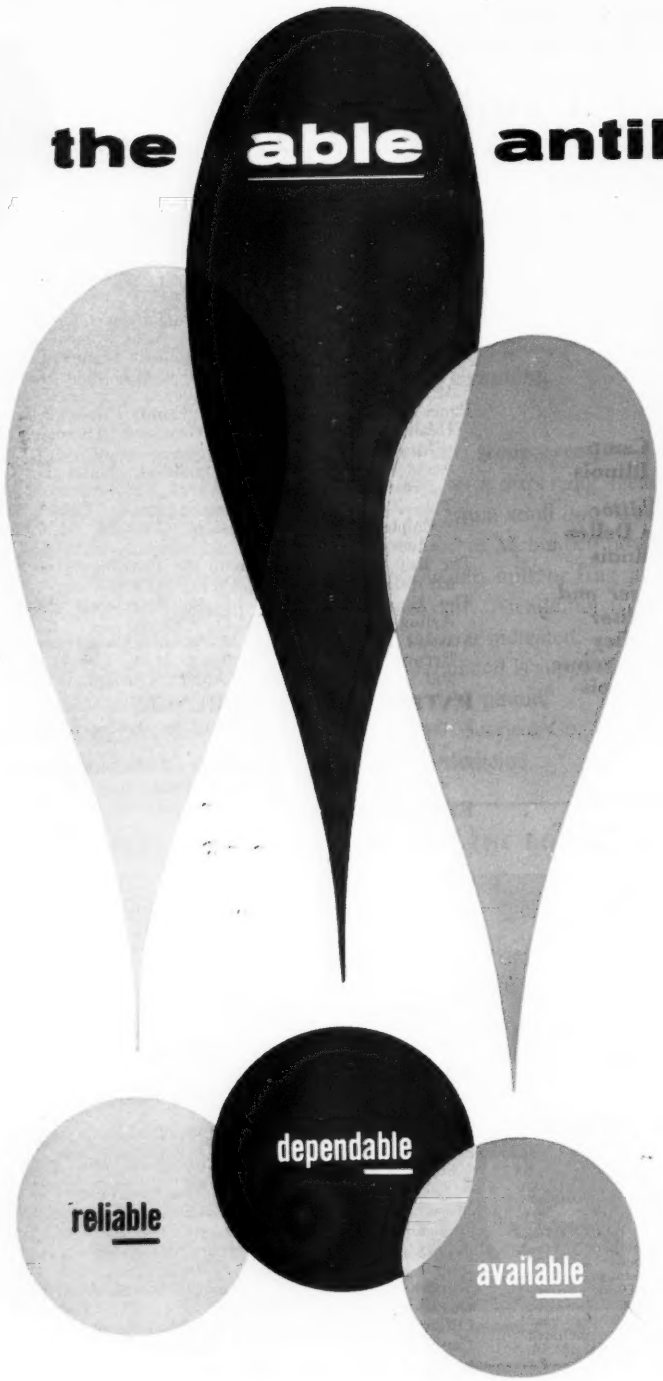
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The Month in Washington

Washington, D. C.—If advance signs mean anything, the Eisenhower Administration next year can be expected to ask Congress for substantially more money for medical research, both direct research by scientists on the U. S. payroll and grants to others.

Currently the federal government is spending more money on medical research than at any time in history—almost $98 million through the National Institutes of Health alone. In addition, other millions are being spent on medical research in the Department of Defense, Veterans Administration and other agencies. Much of it is difficult to isolate in the federal budget.

A special committee named by the National Science Foundation at the request of former Secretary Hobby has been at work for some time on an appraisal of HEW's medical research programs. Its report, due before the reconvening of Congress, should be valuable to both the administration, and the appropriations committees.

A few examples of what is happening this year:

National Cancer Institute has $24.8 million to spend, about three million more than last year, with two-thirds going out in grants to nonfederal researchers. National Heart Institute also is working on a much more liberal budget, $18.7 million in contrast to last year's $16.6 million. Because of the spectacular publicity now being given to heart research as a consequence of President Eisenhower's illness, it is a foregone conclusion that next year this institute will get a great deal more money.

The Mental Health Institute is profiting by the largest single increase of any research operation, almost $4 million, from $14.1 to $18 million. Here again the prospects are for a substantial increase next year; problems of mental health are receiving much public attention, a situation that will not be ignored by Congress. Furthermore, the nationwide survey of mental health problems now about to get under way will point up the shortcomings in mental health research, and be an additional argument for more U. S. dollars.

All the other research institutes also shared in last session's Congressional generosity. The Institute of Arthritis and Metabolic Diseases has about $2.5 million more, $10.7 million instead of the $8.2 million of last year. The Institute for Neurological Diseases and Blindness went from $7.6 million to $9.86 million, the Microbiological Institute from $6.1 million to $7.5 million, and the Dental Health Institute from $1.9 to $2.1.

As has been customary with recent Congresses, Senate and House this year actually voted more money for medical research than the Bureau of the Budget permitted Public Health Service to request. That may not be the situation when appropriation bills come up next session. Secretary Folsom of the Department of Health, Education, and Welfare did not take office until Congress was about to adjourn last summer, but since then he has repeatedly gone on the record in favor of even greater U. S. expenditures for research. In October Mr. Folsom declared:

(*Continued on page 38*)

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FIRST THOUGHT IN HYPERTENSION

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LOS ANGELES

WASHINGTON (Continued)

". . . Today we find new problems and new opportunities. We find that heart disease, cancer, and arthritis are taking an increasing toll. And so today as a nation we are changing our lines of battle to fight this increase in chronic and major diseases. All the facts point to one great need. It is the need for more research—to learn how these chronic diseases are started, so they can be prevented; to learn to detect them in the early stages, so they can be cured. . ."

Again in November, addressing a conference on antibiotics, Mr. Folsom struck the same key, only this time more firmly. After noting that the U. S. now is spending over 12 times more on medical research than it was spending in 1946, he declared: "We must seriously consider making even more funds available for medical research to bring even greater benefits to humanity."

NOTES

The Joint Congressional Committee on the Economic Report may have some health legislation to offer next year as a result of a study of the problems of the low-income family, including methods of paying hospital, physician, and drug bills.

The medical and criminal problems connected with narcotic addiction have occupied the attention of two Congressional groups between sessions, subcommittees of the Senate Judiciary Committee and the House Ways and Means Committee. The latter is particularly worried over abuses it claims to have discovered in the use of barbiturates and amphetamines.

Dr. Frank B. Berry, assistant Defense Secretary for Health and Medical matters, in his annual report warns that the doctor procurement problem again may become acute, despite last summer's two-year extension of the act. He said the Department may not be able to obtain all the older physicians it needs because of the amendment barring the drafting of men over 35 if they have applied for a medical commission and been rejected on purely physical grounds. Also, Dr. Berry thinks the ratio of 3 physicians per 1,000 of troops may be too narrow a margin for safety.

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Transfusion Therapy
Progress and Problems

I. CLINICAL ASPECTS

KURT STERN, M.D., CHICAGO

THE fact that close to four million blood transfusions are annually administered to patients in the United States is sufficient proof for the important role of hemotherapy in medical practice of today. Successful utilization of blood transfusions requires close cooperation between three medical services: (1) the clinical practitioner who decides on the indication for and specifies details of the administration of the blood; (2) the agency which collects, processes and selects the blood. Responsibility for this activity, most commonly organized as a blood bank, rests with specialists, such as pathologists or other physicians qualified in the field; (3) the physician who actually administers the blood to the patient. While in some instances the same physician may carry on two or all three services, more frequently, especially in large institutions, a division of services exists. It is therefore important that each of the participants in hemotherapy is well aware of the special problems inherent in the other services. This paper is an attempt to outline some of the important aspects relevant to integration of hemotherapy, with emphasis on progress made within recent years as well as on problems still awaiting their solution.

Blood transfusions are closely akin to drug therapy. For this reason the following features must be considered: (I) the indication; (II) the product; (III) the administration.

I

The principal indications for use of blood need be summarized only briefly: (1) replacement of acute blood loss; (2) replacement of chronic blood loss and blood destruction, or as substitute for deficient blood formation; (3) supportive therapy in debilitating disease and as a measure to build up rapidly the hematologic status preoperatively or in convalescence.

Strict distinction must be made between indications for blood transfusions in which replacement of total blood volume is to be accomplished, and other conditions in which only certain cellular or soluble components of whole blood are needed. For instance, in most chronic anemias only red cells need be supplied, without any indication for increasing the plasma volume[1,2]. In

From the Blood Center of the Mount Sinai Medical Research Foundation and Hospital, and the Department of Pathology, Chicago Medical School, Chicago, Illinois.

Presented at the General Assembly of the Annual Meeting of the Illinois State Medical Society, May 20, 1954.

some instances, especially when the myocardial reserve is reduced, it is even to the advantage of the patient to use only red cells without addition of plasma. Thus one ensures better tolerance of the transfusion by the patient, as well as more economic utilization of blood. On the other hand, immediate replacement of blood volume can be accomplished by plasma alone, or some plasma fractions, especially serum albumin. Among other plasma fractions, fibrinogen has become an important life-saving product to be used in hypofibrinogenemia and afibrinogenemia, which may occur as serious intrapartum complication associated with abruptio placentae, resulting in severe bleeding difficult to control by any other measure[3]. Other plasma fractions are useful for treatment of disorders of the hemostatic mechanism, such as antihemophilic globulin (AHG), or are indicated in the treatment or prevention of certain infectious diseases by virtue of their content in specific immune antibodies. Within recent years it has also become possible to supply patients with a particulate component of blood which cannot be provided for in the form of routine transfusions, namely blood platelets. Platelet concentrates prepared by means of relatively simple techniques are of great value in tiding patients over acute crises of thrombocytopenic purpura and in certain stages of leukemias[4].

A few words may be in order regarding some terms that are often used interchangeably but actually refer to different products with different indications. These terms concern red blood cells remaining after removal of the plasma. Such red cells can be administered in one of two forms: (a) in the form of *packed cells* with no other suspending medium added, since the small amount of remaining plasma ensures sufficient fluidity of the material; (b) after resuspending the cells in another medium, such as physiologic saline or 5 per cent glucose in physiologic saline. The latter product is called *resuspended red cells.* Packed or resuspended red cells are indicated when (a) the main purpose of the transfusion is replacement of oxygen-carrying capacity, and/or (b) overloading of the circulation is to be avoided because of reduced myocardial reserve. When renal or cardiovascular lesions make administration of sodium chloride undesirable, packed cells are preferable to resuspended cells. In some instances, such as in some patients with hemolytic anemia and other hematologic disorders, plasma is tolerated poorly, and hence it may, in rare cases, be necessary to remove the plasma as completely as possible by washing the red cell with physiologic saline once or more times. The product of this procedure is called *washed red cells.* When deciding on the use of washed red cells, we must be aware that we are trying to make a choice between two evils: one is the possible harm to the patient resulting from presence of small amount of residual plasma, the other is the traumatic injury to red cells resulting from repeated centrifugation. Hence one should reserve use of washed red cells for those patients who do not tolerate even small traces of plasma.

Analogous to drug therapy, indications for blood transfusions must take into account the fact that untoward effects may result from the treatment. Due to this element of risk, every transfusion not fully justifiable is contraindicated. Complications of blood transfusions fall into three categories: (1) Transfusion reactions. Among them, pyrogenic and allergic reactions can be reduced to a certain minimum but cannot be completely eliminated even in the best run transfusion service, where they occur in from 2 to 3 per cent of all transfusions[5]. (5). Although these reactions are rarely serious, they may aggravate the course of disease in already seriously ill patients. (2) Isosensitization. Even when the most modern and cautious laboratory procedures are used in selection and crossmatching of blood, occasionally the recipient may develop sensitization to a blood factor not possessed by him but present in the transfused blood. This potential hazard has vastly increased within recent years because of the frequent use of multiple transfusions. Isosensitization initiated by transfusions is especially serious for women since in a future pregnancy the fetus may carry the same antigen for which the mother has antibodies, thus increasing the likelihood of fetal erythroblastosis in the infant[6]. (3) Transmission of disease. A serious hazard, associated with every blood transfusion as well as with administration of most blood and plasma components is transmission of homologous serum jaundice[7]. Although considerable effort is made and stringent precautions are used for the

purpose of eliminating donors considered to be potential carriers of the hepatitis virus, it has not yet been possible to block completely transmission of this disease by blood transfusion. Awareness of these potential complications of hemotherapy obviously prohibits use of blood transfusions as placebo intended merely as method for raising the morale of the patient or his family.

II

Several important aspects of hemotherapy concern special features of the product involved. Questions are frequently raised pertaining to the age of blood intended for transfusion: in particular, requests made to blood banks indicate that some physicians believe that under certain conditions freshly drawn blood administered without any delay is superior to stored "bank" blood. Actually this is not the case. As to cellular components, leukocytes and platelets deteriorate in blood drawn by conventional methods so rapidly that they cannot be transfused successfully regardless of the time interval between donation and infusion. Platelets can be collected in a satisfactory manner if the blood is drawn into containers with non-wettable surfaces, and then they are resistant to storage for a limited period[4]. Labile components present in the liquid portion of blood, such as complement, antibodies, and factors involved in hemostasis, do not deteriorate appreciably during the first week of storage. The maximum useful life at present of whole blood is 21 days; this period was established on the basis of studies on survival of transfused red cells. When maximum survival of red cells is mandatory, such as in aplastic anemias, replacement transfusions of erythroblastotic babies, or when transfused red cells will be exposed to hemolytic mechanisms, such as in immune hemolytic anemia, or when blood is intended to correct defects of the hemostatic process, blood not older than 2 or 3 days should be given.

The perishable nature of blood must be kept in mind in order to avoid serious economic losses which may result from unnecessary requests for blood. We must keep in mind that a unit requested for a particular patient for a particular date thereby is tied up and not available for another patient; also, if it is ultimately decided not to use this blood for the particular patient, a considerable fraction of its useful life has been lost and the likelihood has increased for its having to be discarded because of overage. Hence, great care should be exerted by the physician in his orders for blood, and notice of cancellation of a specific request for blood should be given to the blood bank at the earliest possible moment.

In the ideal selection of blood, donor and recipient have identical ABO and Rh types. If this condition cannot be realized, the following minimum requirements must be met; (a) every Rh-negative patient must receive Rh-negative blood; (b) blood of group O, the so-called "universal donor", may be given to patients of other ABO groups provided it has been established as "safe" by certain laboratory procedures.

This brings us to the important item of "emergency transfusions", that is administration of blood without previous laboratory tests, such as typing of the recipient and crossmatching with the selected unit. Commonly O Rh-negative blood, preferably free of immune isoagglutinins, is used for such emergency transfusions, sometimes with addition of so-called group-specific substance intended to neutralize the isoagglutinins. Doubtless situations arise in medical practice where administration of blood without the delay caused by pretransfusion laboratory tests may be life saving. However, the physician ordering blood for such a purpose must be aware that he is operating with a calculated risk, since there is no blood that can be assumed to be universally safe without preceding tests. The increasing use of blood transfusion and the frequency of multiple transfusions have greatly enhanced the likelihood for isosensitization. Performance of sensitive pretransfusion tests for detection of immune hemoantibodies is therefore an essential prerequisite for safe hemotherapy. Hence, administration of blood without pretransfusion tests carries the immediate risk of hemolytic transfusion reactions caused by such unsuspected and undetected antibodies, as well as the delayed risk of isosensitization.

While the preceding remarks have emphasized that no blood can be considered a priori as universally safe, it may be even more surprising that some blood is selectively unsafe for certain recipients only. This refers to the fact that a woman should never be transfused with the blood of her husband, her children or of the husband's blood relatives. This interdiction is

based on numerous instances recorded in the literature where isosensitization to otherwise rarely involved blood factors occurred in women who were exposed to a powerful combination of two antigenic stimuli: pregnancy with a fetus carrying a hemoantigen absent in the patient, preceded or followed by transfusion with blood containing the same antigen, which is most likely to be the case with blood of husband or childen[8].

A final important point in proper utilization of blood concerns dosage, that is, the quantity to be given. It is common practice to use 500 ml., or a pint, for each transfusion, because this is the amount of blood that can be safely withdrawn from the healthy donor. However, obviously this does not imply that it is also the most suitable amount of blood to be administered to every patient. On the contrary, there are numerous instances, where it is much more advisable to give smaller amounts of blood at frequent intervals, such as quantities of 100 ml. of blood daily or every other day. This has been strongly emphasized by Davidsohn[9] in recent years, especially pertaining to hemotherapy of patients with hemolytic anemia, leukemia, and other hematologic disorders. Reports from the Mayo Clinic[10] indicate that this is also true for patients with anemia due to chronic nephritis. Small amounts of blood are as a rule much better tolerated by these patients, and fractionated transfusions are less likely to cause harmful side effects.

III

The last aspects to be discussed concern certain important considerations relating to administration of blood. (1) Every transfusion is a surgical procedure, necessitating observance of strict asepsis of technic. (2) The sterility of the blood must be preserved. Blood is not only perishable, but also represents an excellent medium for bacterial multiplication. This hazard increases with the length of time elapsing between the moment the blood is removed from refrigeration until it is administered to the patient. If an appreciable delay occurs in administration after the seal has been broken, such blood should not be used. (3) Excessive speed of administration can lead to serious cardiovascular embarassment, and is especially contraindicated in patients with weakened myocardium. On the other hand, rapid administration of blood is essential in cases of shock in order to replace lost blood volume. In such cases, preceding or simultaneous administration of plasma, or suitable plasma expanders, may be combined with blood transfusions. Several devices have been recommended for speeding up administration of blood under such conditions. Use of positive pressure, created by rubber bulbs, is still encountered but this is a potentially hazardous procedure due to the possible introduction of air embolism. Hence, this method must be carefully controlled by a qualified person who will interrupt the transfusion before fluid in the bottle is exhausted. Other devices presently available appear safer, such as rotary wheels which compress the plastic tubing through which the blood flows and in this way accelerate its administration so that a unit of blood can be administered in from 5 to 10 minutes. Amounts of blood administered during a given time can be also increased by infusing more than one vein simultaneously.

Within the last years considerable discussion has centered around possible advantages of intra-arterial transfusions as compared with the classic intravenous method[11–15]. There seems to be no doubt that, with proper technic, intra-arterial administration of blood can lead to near-miraculous resuscitation in cases of extreme shock. On the other hand, the technical difficulty of the procedure, and dangers such as air embolism and gangrene of limbs when arteries of extremities are used, militate against using intra-arterial infusions routinely. Most authors agree that this method be reserved for special cases, particularly in shock during operations when arteries close to the aorta are already exposed. It has been pointed out that blood used for such intra-arterial transfusions should be not more than a few days old because potassium concentrations exceeding 40 mg./100 ml. which may be present in older blod are hazardous when introduced directly into the arterial system[15].

Frequently it is necessary to combine administration of blood with some other intravenous therapy. It is important to realize that solutions compatible with blood to the extent that they may be permitted to flow through the same tubing either simultaneously or alternating with the blood are primarily physiologic saline and 5 per cent glucose in physiologic saline. Although isotonic with blood, 5 per cent glucose in water is not safe for such administration with blood, because it may cause pseudoagglutination

and hemolysis with serious consequences[16–18]. Several other intravenous solutions, such as protein hydrolysates, and vitamin supplements, should not be administered through the same tubing before or after blood transfusions, because chemicals contained in such solutions may bring about clotting or clumping of blood and thus interfere with safe administration. It is also inadvisable to inject sundry intravenous medication directly into the blood bottle or through the tubing. On the one hand, this may lead to bacterial contamination of the blood, and on the other, interactions of various chemicals with blood may bring about untoward changes and impair both chemical integrity and sterility of the blood. Some authors have recommended to add antihistaminics to blood in order to avoid or reduce allergic reactions[19]. There is some doubt in my mind whether it is justified to add a drug to every unit of blood whereas only a relatively small percentage of recipients will be benefited by it. It would seem to me more judicious to give antihistaminic medication by the usual route 10 to 15 minutes before transfusion to those patients who on the basis of past experience are likely to suffer allergic reactions from blood transfusions.

Eternal vigilance is not only the proverbial safeguard for preserving liberty, but also indispensible for assuring safety of blood transfusions. This is to imply that transfusion reactions are deprived of their most dangerous effects, if they are noted early in the transfusion, specifically before administration of more than 100 ml. Hence, patients receiving blood transfusions should be under constant observation during administration of this amount, and subsequently should be checked at intervals of 10 to 15 minutes until the transfusion is completed. Most commonly observed are the so-called allergic, or febrile (pyrogenic) reactions, which occur even under best possible conditions with a frequency of from 2 to 5 per cent. As mentioned before, reactions caused by overloading of the circulation in patients with reduced myocardial reserve can, as a rule, be avoided by adequate control of rate of administration of the blood. The most serious type, the hemolytic transfusion reaction, results from administration of mismatched blood. This may be the consequence of (a) technical errors in selection and crossmatching of blood, (b) clerical errors, with the wrong blood given to a patient because of mistaken identity, mixup in bottles, etc., (c) incompatibility not detected by presently available laboratory tests because of extremely low activity of the antibodies in vitro. The first two causes should and can be eliminated with proper management of blood banks and cooperation of the medical and nursing staff. Whenever a hemolytic transfusion reaction is suspected, it is essential to institute immediately suitable laboratory tests in order to establish the correct diagnosis. As a rule, every transfusion reaction should be followed by rechecking of all pretransfusion tests, and by examination of urine and blood serum or plasma for free hemoglobin, determination of serum bilirubin and serum urea nitrogen, since clinical symptoms alone are usually not sufficient for classifying the type of reaction.

A complication which was observed already many years ago, but was more closely investigated in recent years, is the tendency of patients to exhibit diffuse bleeding and oozing from surgical wounds and capillary bed following administration of incompatible blood. Recent studies suggest that this is due to the development of a deficiency in blood fibrinogen which interferes with the normal hemostatic mechanism. Accordingly, it was found possible to control such bleeding readily by administration of fibrinogen[20].

Administration of large amounts of citrate present in preserved blood has been suspected to be responsible for some untoward effects of transfusion. Actually numerous units of blood would have to be given within a relatively short time in order to overload the organism with the citrate ion, since this compound is rapidly metabolized by the liver. In the presence of liver disease blood citrate concentration following multiple transfusions has been found to reach levels sufficiently high to bind all ionized calcium available[21].

As mentioned previously, the plasma potassium content of blood rises with storage, especially after 2 weeks, and thus there is a danger of producing hyperpotassemia in patients with disturbed renal function[22]. Hence, such patients should be given blood stored for less than 10 days in order to avoid introduction of excessive amounts of potassium.

The preceding remarks on progress and problems in present-day hemotherapy undoubtedly

omitted some important aspects, and may have given undue emphasis to others. Nevertheless they will have served their purpose if they have pointed out some ways and means how clinical physicans, surgeons, pathologists, and other qualified persons in charge of blood banks can and must collaborate closely and understandingly in order to ensure successful utilization of hemotherapy.

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Gastrectomy

This report is based on a study of 308 gastrectomies performed by 26 surgeons at Salem Hospital, Salem, Mass., over a 15-year period [1939-1953]. Gastrectomy was performed on 38 per cent of hospitalized patients in whom a diagnosis of gastric carcinoma was made and on 22 per cent of those hospitalized because of gastric or duodenal ulcer. The same percentage of patients had a gastrectomy whether the ulcer was located in the stomach or in the duodenum. It is anticipated that gastrectomy will be offered to a larger number of duodenal ulcer patients in the future and at an earlier stage of persisting disease. A greater number of patients with gastric ulcer should have a gastrectomy—perhaps 75 per cent. *Paul R. Hinchey, M.D. Review of Fifteen Years' Experience with Gastrectomy in a Community Hospital, New England J. Med. August 4, 1955.*

Cardiac Arrhythmias—
Their Prognostic Significance in Recent Myocardial Infarction

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THE care of patients with myocardial infarction is beset with many complicating factors influencing the prognosis of the disease. The more extensive one's experience in treating these patients, the more respect one gathers for them and the less is the tendency to prognosticate as to the final outcome. It is most important that the physician be on the alert for any complicating factor that may increase the mortality rate in a disease that already carries a high incidence of mortality, particularly if this added hazard is amenable to therapy.

All of us are aware of the serious significance of some of the complications of this malady: shock, embolization, congestive heart failure, ventricular or septal rupture, and the arrhythmias. This paper is directed toward this latter complication.

We have for some time been intrigued by the role of the arrhythmias in determining the happy or dismal outcome of acute coronary accidents, and have come to the point where we occasionally use the presence of certain arrhythmias as a factor in conditioning the relatives for a possible unhappy ending. We have, however, not reached the extreme where the presence of one isolated premature systole or of a mild tachycardia is necessarily a reason for the institution of rigid and vigorous therapy or painting a gloomy picture.

We shall see from the following survey that the outcome is seriously affected by the presence of abnormalities of rate or rhythm. Some of our observations are at variance with the findings of other investigators. One important problem—a gallop rhythm—has been omitted. This omission is deliberate, because we have been unwilling to accept the diagnosis unless heard by ourselves and because, strictly speaking, it is not an abnormality of pulse formation nor of conduction.

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MATERIAL

The material herewith presented consists of an analysis of 300 consecutive cases of acute myocardial infarction studied and treated in a general private institution over a four year period from 1947-1951. All of the cases had one or more electrocardiograms and interpretation of the data was limited exclusively to those instances where arrhythmia was diagnosed by ECG. The study was further limited to the first four to six weeks after infarction, usually during the patient's hospital stay since it has been shown by other investigators[8-10] that after two months, the ultimate prognosis in those patients developing arrhythmias during the early days or weeks after infarction is only minimally affected. No discussion will be made of mechanisms, symptoms, or treatment, nor of age or sex, although in reference to the latter we are aware that the female patient seems to be more prone to develop irregularities than the male.[12-14]

Wherever possible an attempt was made to exclude any pre-existing arrhythmia prior to the infarction. This was not always possible and although we realize that such omissions may alter some of the figures presented, the number of such instances was small enough not to invalidate any of the conclusions.

The overall mortality for the 300 cases was 28.7 per cent, a figure similar to that mentioned by Katz[8] although quite a bit lower than the 51.5 per cent mentioned by Askey[3] or the 46 per cent noted by Woods[18]. The location of the infarct, as interpreted from the ECG, was studied and is summarized in Table I. The majority of cases could be defined as either anterior or posterior and showed an almost exactly equal mortality percentage for both locations. Where

TABLE I

Location	Total	Mortality	Percent Mortality
Anterior	148	36	24.3
Posterior	109	26	23.8
Lateral	9	1	11.1
Septal (antero- or postero-)	8	5	62.5
Atypical	26	18	69.2

the infarct was limited to the lateral wall alone, the death rate was far below the average figure; conversely, where the infarct was believed to involve the septum, the mortality was high. In a significant number of instances an exact designation of location could not be made and such infarcts were termed atypical. This group showed the greatest mortality, probably because the infarct was not the first or because it complicated pre-existing advanced coronary artery disease[8].

TABLE II

Cases	Number	Mortality	Percent Mortality
Total	300	86	28.7
Total with RSR	159	26	16.0
Total with Arrhythmias	141	60	42.5

Almost half the cases (see Table II) showed some abnormality either of the cardiac rate or rhythm. In this group the mortality was 42.5 per cent, significantly higher than the overall figure of 28.7 per cent noted above. Where the rhythm was sinus in origin without any complications either of rate or conduction, the mortality was only 16 per cent.

ANALYSIS

TACHYCARDIAS

As would be anticipated the most common disturbance encountered was sinus tachycardia which occurred in 73 patients, over half of the group with the arrhythmias (see Table III). Sinus tachycardia was defined as being present when there was a cardiac rate greater than 100. Many more cases would have fallen into this category if occurrence of sinus tachycardia at any time were included. Certainly, transient increases in rate may have occurred in every patient. However, we limited our analysis to those patients with sinus tachycardia persistent enough to be observed clinically and recorded electrocardiographically on more than one occasion.

TABLE III

Type	Total	Mortality	Percent Mortality
TACHYCARDIAS			
a) Sinus c CHF	16	7	43.7
b) Sinus s CHF	57	21	36.8
c) Sinus total	73	28	38.3
d) Nodal	5	3	60.0
e) Ventricular	3	2	66.7
PREMATURE SYSTOLES			
a) Auricular	4	0	0
b) Nodal	1	0	0
c) Ventricular	14	6	42.8
BLOCK			
a) 2nd Degree	3	1	33.3
b) "Complete"	3	1	33.3
SINUS BRADYCARDIA	6	3	50.0
NODAL RHYTHM	1	0	0
AURICULAR FIBRILLATION	20	13	65.0
COMBINED ARRHYTHMIAS	8	3	37.5

This group was further subdivided into those who did or did not exhibit congestive heart failure, the former comprising almost ¼ of the 73 cases. Although the mortality rate was higher when sinus tachycardia and congestive heart failure were in combination it was hardly significantly greater than the figure for sinus tachycardia alone. Mintz and Katz[14] in their review, however, indicate that such a combination is a grave prognostic sign in recent myocardial infarction quoting a mortality of 71.4 per cent as compared to 57.1 per cent for sinus tachycardia alone.

The appearance of sinus tachycardia, therefore, should be treated with respect. It is probably more common where there has been extensive long-existent heart disease and its gravity depends on the degree of pre-existing damage and duration of the tachycardia[2].

We observed 5 cases of nodal tachycardia and 3 cases of ventricular tachycardia in our study. In both groups the mortality rate was 60 per cent or greater. Experimental work by Harris[6] indicated that, especially in the case of ventricular tachycardia, rapid elimination of this arrhythmia is important in preventing ultimate ventricular fibrillation. The extreme significance of the ventricular variety of tachycardia was underscored by Ambrust and Levine[1] who studied cases of paroxysmal ventricular tachycardia of various etiologies and found that where this arrhythmia complicated recent myocardial

infarction, 64 percent were dead in one month.

PREMATURE SYSTOLES

Nineteen cases were noted to have premature systoles of which the greatest number by far (14) were ventricular in origin. The presence of the auricular or nodal variety carried no serious prognostic significance in the small number observed. Those cases of infarction exhibiting ventricular premature systoles, however, revealed a mortality of 42.8 percent, higher than the average for the entire group. Master[12] and Rosenbaum[61], in their surveys, found no alteration in the overall mortality. Additional factors should be taken into consideration in evaluating the import of ventricular premature systoles. These include their frequency if occurring individually, the appearance of paroxysms, and the presence of multifocal origin.

BLOCK

The effect of conduction disturbance in acute coronary artery occlusion was studied by Master[13] who found an overall incidence of 3.2 per cent. It is said to be much more common in the older age group and more commonly associated with posterior wall infarcts because of the greater distribution of blood from the right coronary artery to the conduction system[5]. Frequently the sudden onset of P-R prolongation or higher degree of block may be the first and only sign of recent infarction. The gravity of the conduction disorder is apparently dependent on the rate, with the slower rates carrying the more serious prognosis. A rate of less than 40 is said to be critical.[12-13]

We encountered six cases of block of a degree higher than simple P-R prolongation, an incidence of 2 per cent with a mortality of 33 per cent. Only one of these had a rate lower than 40, a fact which may be instrumental in the lower mortality than generally quoted.

In a survey by Schwartz[17] the influence of the rate is similarly borne out.

SINUS BRADYCARDIA

A persistent sinus rate of less than 60 was noted in six patients, of whom three expired, a rather high figure in view of the experience of others.[12] Autopsies were performed in two and in neither was there any serious extracardiac factors contributory to death, although in one there was more than one recent infarct. We can offer no relevant explanation for this observation.

NODAL RHYTHM

Only one case was encountered.

AURICULAR FIBRILLATION

The second most common arrhythmia observed was auricular fibrillation, occurring in 20 cases or 6.7 per cent of the total. In this group there were 13 deaths, a rather high figure. Even more striking is the fact that of this number all the patients expired in whom the auricular fibrillation was persistent, whether accompanied by congestive heart failure or not, while in those where auricular fibrillation was transient there was only one fatality. Neither Levine[11] in his survey nor Master[12] in his, found such an unusually high mortality rate. Askey[3], however, found similarly high figures and emphasizes the importance of the persistence of this arrhythmia in ultimate prognosis.

COMBINED ARRHYTHMIAS

There were eight cases in whom one or more arrhythmia was observed (see Table IV). The mortality in this group was no higher than that for the patients with single type.

TABLE IV

COMBINED ARRHYTHMIAS

Sinus bradycardia with 1st degree A-V block
Auricular fibrillation with ventricular premature systoles
Auricular fibrillation and flutter restored to RSR with frequent auricular premature systoles
Auricular fibrillation with frequent nodal premature systoles
Frequent nodal and auricular premature systoles becoming flutter-fibrillation
Complete A-V block with auricular fibrillation (expired)
Sinus tachycardia with frequent ventricular premature systoles (expired)
Auricular fibrillation with paroxysms of ventricular tachycardia converted to RSR (expired)

CONCLUSIONS

There can be no doubt from the foregoing observations that disturbances of rate or rhythm in association with recent myocardial infarction significantly affects the mortality rate. Certain arrhythmias seem to have a more profound influence than others. These included persistent auricular fibrillation, sinus as well as nodal and ventricular tachycardia, multifocal and frequently occurring ventricular premature systoles and sinus bradycardia. It is apparent, therefore, that one should be on the alert for these complications especially in view of the newer methods

of therapy now available to the medical profession.

SUMMARY

1. One of the most important complicating factors in recent myocardial infarction is the appearance of disturbances of rate or rhythm.

2. A survey is presented of 300 consecutive cases of recent myocardial infarction.

3. The overall mortality was 28.7 per cent.

4. Cases accompanied by arrhythmias showed a mortality of 42.5 per cent; uncomplicated infarctions showed a mortality of 16 per cent.

5. The individual arrhythmias and their inpuence on prognosis is discussed.

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Liver cancer

The average duration of life after onset of symptoms is extremely short in the majority of patients with carcinoma of the liver. When diagnosis is established before death, it usually is predicated upon a rapid decline of the patient's general physical condition and death may result from cachexia, liver failure, anemia from bone marrow replacement by metastases, or hemorrhage. Until more specific diagnostic methods are available, carcinoma of the liver should be tentatively considered in any patient with rapidly progressive cirrhosis, enlargement of the liver, pain in the upper abdomen, weight loss, and cachexia. Needle biopsy of a nodule or tender area in the liver may confirm the diagnosis but the involvement of the tumor can be accurately judged only at laparotomy. It is necessary, therefore, to assess each case on the basis of laparotomy findings, and to perform this procedure before denying the patient the only chance of cure. Even excision of metastatic deposits may be reasonable in selected cases. Since liver metastasis soon involves the vital structures, longer life and good palliative results may be afforded by resection or by irradiation. *Cancer of the Liver. Cancer Bull. May-June 1955.*

Panel on

School Health and the Family Physician

Health of School Children

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ANY discussion of school health in Illinois should begin and end with the statement "The Health of School Children is Everybody's Business," and the only way to accomplish the goal of perfection is by "Everlasting Teamwork."

The definition of health formulated by the World Health Organization should be kept in mind: "A state of complete physical, mental and social well being and not merely the absence of disease or infirmity." All children in the state should have the benefit of adequate total health supervision from birth through adolescence to aid them in attaining such a state of health. In Illinois with its existing and potential resources, it should be possible to achieve this goal of providing total health supervision for all children.

It is said, our country's greatest heritage is our children, and that its greatest tradition is the high development of individual skills and individual initiative. In a world traveling rapidly toward collectivism, it is very easy to lose sight of the individual. Traditionally American parents have done their utmost to provide a better background and opportunity for their children than was available to them. I believe that today most people take their responsibilities of parenthood more seriously than ever before. We *know* that our children will be faced with even greater tasks and responsibilities than ours. How wisely they are prepared will determine their success.

The well being of our children is of the utmost importance now and in the future. To promote and maintain our children's health is everybody's business and demands everlasting teamwork. The time has come when we need no longer deliberate at length about principles, since these have been carefully tried out, revised, and now reasonably well established. There is no necessity for awaiting further the development of any techniques, because we have good tools and good methods with which to work. The game has been held up by the lack of that teamwork between physicians, dentists, educators, nurses, and parents and through which we will be able to harness the forces at our command and put them to work, realizing at last the fruits of what Kipling had in mind in his verse:

"It ain't the individual
or the army as a whole,
But the everlasting teamwork
of every bloomin' soul."

Interest in school health has spread across the country like an epidemic during the past several years. This interest has not been confined to any one group or to any section of the United States. Educators, physicians, dentists, nurses, parents, and many others, along with the organizations to which they belong have all been involved. Among the indications of this increased interest are the development of school health councils, the formation of school health committees in medical societies, the institution of health courses in teachers' colleges, and the holding of meetings, conferences, and institutes on school health.

Why this growing concern, this growing interest in school health? Perhaps it is because the school's opportunities for health education and its obligations for health supervision are becoming more clearly defined. Certainly the law requiring health examinations three times during school life has focused attention on this activity in Illinois. A review of some of these opportunities and obligations in order of their priority for children, may help us to think together:

1. During the school term children are confined in classrooms several hours each day.

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This demands development and maintenance of a school environment that will promote mental and physical health.

2. The school situation brings pupils together in large groups at a time in their lives when they are very susceptible to the common diseases of childhood. This demands carefully determined policies for prevention and control of communicable diseases.
3. Even in the best organized school some accidents and sudden illness are bound to occur. This requires a carefully worked out program to cope with emergencies and to meet disaster situations.
4. The school years present an unparalleled opportunity for health education of all of our people during the formative years of their lives. This means that if we are to take advantage of this opportunity, a well organized program of health instruction is essential to lay the groundwork for healthful living throughout life.
5. Modern conditions of living encourage an arm chair or sedentary existence. This necessitates a program of physical education adapted to individual needs to provide skills that will serve as incentives to wholesome physical recreation throughout life.

Even a cursory study of these factors makes it clear that the development of a school health program is a complex task—too big for any one agency or group to achieve alone. It is obvious that the efforts of parents, teachers, nurses, physicians, dentists, and many others will be needed and that each of these has certain responsibilities.

First priority in responsibility for the health of children rests with the parents. They have the obligation to provide conditions in the home that will be conducive to health and to provide adequate medical and dental care. The family physician and dentist serve as health advisors to the family and render needed diagnostic and treatment services. The health department furnishes preventive and protective services for the entire community including school children. The school supplements and reinforces the efforts of the home and has the obligation to provide conditions and educational services conducive to health. Various voluntary health agencies make important contributions with particular emphasis on certain special health problems.

The integration of all these functions requires the closest co-operation and challenges all concerned. But in this country we have an answer to this kind of challenge. It is an answer typical of our democracy—the good old American system of teamwork. It is a system that again and again throughout history has proved superior to any other.

How can we get this kind of teamwork in school health? How can we develop school policies that will be acceptable to all those who are expected to carry them out?

There is a principle of good teamwork involved that may hold the secret of success in this project. It is, *mutual respect for each other's skills and responsibilities.*

Good teamwork demands that the educator turn to the physician and dentist for advice on the medical aspects of school health. Similarly the physician and dentist defer to the educator on questions of teaching techniques and procedures. Both seek the counsel of those trained in public health on problems in this field. And all have in mind the fundamental responsibilities of the parents for the health of their children.

Trust, faith, and good will will grow and prosper in this kind of relationship. This does not mean that there is no overlapping of responsibilities. The school has an obligation to help make health services worthwhile educational experiences for personnel can make important contributions to health instruction. In general, however, the chief task of education can be broadly defined as teaching, that of public health as preventing disease and protecting community health, and that of the medical and dental professions as providing diagnosis and treatment.

Only a program that (1) honors parental obligations, (2) preserves the administrative organization of the school, (3) recognizes the responsibilities of public health, and (4) respects the framework of the private practice of medicine can accomplish this goal.

PANEL CONTINUES

Accident Prevention in Childhood

JAMES B. GILLESPIE, M.D., URBANA

ACCIDENTS are the leading cause of death in the 1 to 14 age groups, exceeding in frequency the next six most frequent causes. Each year in the United States there are an estimated two million child accidents which require medical attention. Twelve thousand or more of these accidents result in death and 40 to 50 thousand in injuries of a permanent nature. Child accident reduction is an obvious challenge to all groups and individuals in the United States who are interested in child life conservation.

Since the late 1940's there has been an increasing awareness of this urgent problem, and studies and programs to improve the situation are underway throughout the country. These involve activities along educational, engineering, and enforcement lines. Participating organizations have been health departments, the medical profession, the National Safety Council, life insurance companies, child welfare groups, service clubs, Parent-Teachers Associations, and others. Despite this aroused interest, efforts pertaining to the dissemination of appropriate information to professional and lay groups, research as to the causes of accidents, and the enactment of adequate laws for accident prevention, will need aggressive and sustained support by all groups interested in improvement of the present morbidity and mortality rates.

It would be erroneous to suggest that the focal point in accident prevention for the young child lies elsewhere than in the home. It is primarily the responsibility of parents and adult members in any household to arrange the home and premises so they are safe. Moreover, it is essential that instruction and guidance in matters of accident prevention be given by senior members of the family to the juniors early in life. Since the first five years of the child's life are spent almost entirely at home, a basic groundwork in accident prevention will not be established unless safe practices in every day living are observed at home. Parents should provide not only adequate daily protection for the young child but also training in safe conduct. The pediatrician or family physician may provide considerable assistance to parents during the early years since these infants and young children are seen rather frequently in the physician's office. On such occasions a physician, familiar with the types of accidents prevalent at various age levels, may advise practical preventive measures to be observed within and about the home.

After the youngster reaches the fifth year of age, others than the family will share in all programs which influence his behavior and conduct. At this period in the child's life the school teacher, the public school system, the school nurse, and public health department assume responsibilities in matters of safe practices and conduct for almost every child.

The application of priniciples of preventive medicine to children has brought about striking improvement in mortality from the contagious and infectious diseases. Physicians and nurses should adopt a more critical attitude toward the cause of accidents, approaching the problem much in the matter in which disease has been studied. The brilliant results obtained in preservation of child life in general could well be obscured by mounting accident tolls.

Some children appear more susceptible to accidents than others. There are relationships between both physical and emotional health and safety. Defective hearing, impaired vision, and poor muscle co-ordination, themselves no threat to life, may play a direct role in the causation of accidents. A child suspected of having one or more of these defects should be examined by a physician and appropriate treatment should be provided. When corrective therapy is not possible the child must be adequately protected from injuries and taught principles of safety as related to his defect. This is good evidence for the value of vision and hearing screening tests in the school health program. There are data which demonstrate that the child who is unhappy or lacks self-confidence may express his unhappiness in the form of hurts and injuries to himself. Any child receiving more than his share of mishaps should be considered from the standpoint of a possible emotional disturbance. Some parents

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may need assistance in recognizing and properly caring for the emotional problems of their child. There is the occasional accident prone child in whom no obvious physical or emotional cause can be found for his frequent injuries. It is likely that some of these children suffer from subclinical physical or emotional defects.

Were it possible to purchase a "vaccine" to protect children from accidents, all parents would hasten to obtain it. There is, of course, no such formula, but there does exist much knowledge about the prevention of childhood accidents, which may serve as a "vaccine" when properly applied. A study of accident deaths to 775 preschool children revealed that motor vehicles were responsible for 34 per cent, while burns, conflagrations and explosions accounted for an additional 27 per cent.[1] Of the remainder, drownings caused 13 per cent, falls 6 per cent, and poisoning 5 per cent. Of the 267 young boys and girls killed by motor vehicles, 217 were hit or run over. The greatest number of these accidents occurred at home or in the vicinity of the home.

In a series of 491 nonfatal home accidents involving children and investigated in Rochester, New York, 48 per cent were judged to be preventable.[2] It would appear that boys require more close attention since studies indicate that the male is most accident prone.[3] Bain reports that 400 children under 5 years of age die annually in the United States from poisoning.[4] Aspirin, barbiturates, kerosene, lye, lead, and arsenic account for two-thirds of the deaths. In the state of Illinois in 1953 a total of 5,375 accidental deaths in persons of all ages was reported.[5] Of these 2,299 resulted from motor vehicles. Of the 3,076 deaths not due to motor vehicles 1,547 occurred at home. Zook[6], in a study of costs of hospitalized accidents, many being burns, to a single agency caring for children (Division of Services for Crippled Children, University of Illinois) noted that the average cost per child to the State of Illinois was $713.43. Dollars and cents figures, of course, fail to tell the complete story but are indicative of the tremendous economic losses from accidents.

The "vaccine" of safety must be administered to parents and not to the young child. The information relative to childhood accidents can be given to parents in relation to the child's growth and development for special types of accidents have an affinity for children in particular age groups. In the run about period the pediatrician or family physician should impart matters of safety education to the parents as a part of the regular office visit. It is advisable to begin the program of instructing parents as soon as the child can crawl and explore as an effort to anticipate some of the potential accidents. In this way safety is early made part of the child rearing program. Dietrich[7] in a discussion of a clinical theory of accident prevention emphasized the need for total protection in children under one year of age with increasing use of education as the child grows older. Protection is aimed at keeping the child unharmed until he can be taught. Excellent and brief brochures pertaining to the various types of accidents and their prevention in children in the various age groups have been published by the Metropolitan Life Insurance Company, the Prudential Insurance Company, and perhaps others. This material is available to physicians and to parents through the several companies.

The threats to a child's safety will vary with age and sex, the economic level of the family, the nature of his environs, the type of housing, the season of the year, and with the common good sense of his parents. Public health workers and physicians should be aware of the particular hazards in their community so that planning for family and community accident prevention will be appropriate to the area. Since public responsibility to prevent accidents increases when the child enters school, the responsibility of public health agencies to study, develop, and apply effective measures for accident prevention increases for children over 5 years of age.

Education, the essence of any program for accident prevention, should not cease at any specific age. To be effective, continuous safety programs should be conducted as part of every regular school curriculum. The school automobile driving instruction program is an example of safety instruction. Attention should be given to the safety of the school premises, playgrounds and recreational areas, traffic conditions, and the home. Safety education can be extended through press, radio, television, exhibitions and demonstrations, safety program meetings, and the distribution of suitable materials. Distribution of material may be a variety of routes. One of the

most unique has been the enclosure of safety messages with the monthly bills of telephone companies in several states, including Illinois. It is obvious that the scope of a well rounded program of safety is too great for any single organization and must depend upon the combined efforts of all individuals and agencies interested in reducing the morbidity and mortality from accidents.

The American Academy of Pediatrics has developed a subcommittee on accidental poisoning. The purpose of this committee is to develop Poison Control Centers in hospitals throughout the United States; a number of hospitals in Chicago and downstate Illinois and elsewhere in the United States are now participants in this program. A poisoning control manual prepared by this committee is now available to those who are in a position to organize and assist with a Poison Control Program. Pfizer and Company devoted a large part of its regular advertising space in the Journal of the American Medical Association on April 24, 1954 to accidents in the home. The American Standards Associations subcommittee on flammability of textiles has proposed a study of the type of textiles associated with burns in children. The high incidence of poisoning from common, pleasant tasting, household medicinal agents in young children, especially aspirin, is well known by members of the medical profession if not the laity.

In the first 500 poisoning cases reported to the Chicago Poison Control program, 84 were due to aspirin.[8] It has been proposed to the Pure Food and Drug Administration that such medicines be labelled "keep out of the reach of children" or "put in a safe place" and that salicylates should be packaged to make accidental access more difficult. These are several examples of the current attention by various organizations to accident prevention.

The prevention of childhood accidents is obviously not simple nor can the responsibility for it be shouldered by any single individual or group. The task of thousands of workers in other fields of medical activity and research is not easy but this has not proved a deterrent to an ultimately successful goal. It is the responsibility of the medical and nursing professions, particularly those sections most interested in child welfare and public health, to assume leadership in all efforts directed toward prevention of accidents in childhood.

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PANEL CONTINUES

The Approach of Organized Public Health with Particular Emphasis on Relationships

EDWARD M. THOMPSON, M.D., CLINTON

DOCTOR DRENNAN has given his definition of school health, and indicated his impression of desirable procedures in which the practicing physician functions in the school health program. It has been stated or implied that the school health program is not the sole responsibility of any one person or any one agency within the community. The stage has been set for discussing the approach of organized public health in the development and execution of an effective school health program.

Because of special personal and wide community interest in the health of the school child, organized public health advocates the use of the "team approach". The "team" would be composed of a number of players, whose special interest and training qualifies them for team membership, *on a co-equal basis.* As you well know, teams may differ in their standing; they may be professionals or amateurs; they may differ in their performance record; they may differ in fame, popularity or public acclaim, but the fact remains — the team is made up of individual players, each of which has definite responsibility for co-operative action. Incidentally, most athletic teams are recognized under a team name. We might elect to call our school health team a *"Community School Health Council"* I would like to say just a word about the individuals composing our team and to indicate a relationship between the various members:

First, there is the parent, whom we would presume to have a vital interest in the health and welfare of his offspring. The parental interest is likely to vary widely, because parents vary widely in their training and personality. The parental interest would range from a genuine intelligent interest in the child's personal health and the forces within the community which would contribute toward maintaining optimal health for his and his neighbors' children. Other parents would have a vague interest and would do only those things for their children's health which they believe would be forced upon them by the so-called Illinois School Examination Law or the school administration, e.g., some parents would feel that they had fulfilled their responsibility when they had taken their child for a medical and dental examination. They would ignore completely the findings and recommendations of the physician and dentist. Obviously the parent, whose responsibility is great, cannot do the job alone but, for obvious reasons, the parent should be represented on the team, since he supplies the commodity over which school health is concerned—the school child.

Second, there is the school administrator and the classroom teacher. The school personnel is trained in the principles of pedagogy. They are engaged in one of the greatest of all professions—training children for life; health is an essential part of life. The schools would have the responsibility of presenting health instruction to students at the various grade levels, in such a way as to give meaning; we call this concept "functional health education". The classroom teachers and school administrators could not be expected to give physical examinations or professional interpretation of medical and dental findings. The schools have great responsibilities, but they must look to other members of the school health team for this technical and specialized service—which only the physicians and dentists can provide.

Thirdly, there are the professionals: the physicians, dentists, psychologists, etc., and there are specialized services within the professions, which would be utilized in the school health program, such as the otologist, opthalmologist, and the orthodontist.

Obviously, the professionals cannot render service unless they have access to the subjects in need of specialized service; they too cannot do the job alone and must rely on other members of the school health team for assistance, in bringing the needy subjects to them for professional services; the professionals must rely on other members of the team for education and motivation of parents as to the health needs of the children.

Fourthly, I should like to call the next member of the team, *Organized Public Health.* The fourth member is represented by the medical health officer, the public health nurse, the public health dentist, the Sanitary Engineer or Sanitarian, the mental hygienist, etc. These individuals have been trained in medical and other scientific principles, which are suitable for mass application, in promoting and preserving the public health. The Public Health Dept. is an official health agency, serving in a liaison capacity, bringing together and co-ordinating all groups interested in school health. Public health may assist in the study of problems in the area of school health; they may help in formulating a program for controlling the problems; and lastly, public health may participate in periodic evaluation of the programs to determine the effectiveness of group effort in the school health program. Here again, public health cannot function without the schools, the physicians, and dentists.

At this point, I should like to emphasize that on the team mentioned above, there is no place for the "grandstand" player, who tries to dominate the program of school health. We must remember that the team is composed of individuals of different backgrounds of interest and special training. There must be a *mutual respect* between the members of the team—one for the other. For example, in the field of school administration and classroom teaching, most physicians are laymen; in the field of medicine and dentistry, most school administrators and classroom teachers are laymen; the members of the team representing the teaching profession, medicine and dentistry must recognize that there are special interests of parents, which must be considered if the school health team is to function in harmony.

The team approach in planning the school health program is of major importance. It could not be assumed that the schools would accept a school health program designed and prepared by physicians, dentists, and public health people, without consideration of the schools' special interest; likewise, the members of the team representing the medical and dental professions, would be reluctant to accept and to participate in a school health program, which they had not helped to plan. Professional people in general, whether they be school or medical, desire a right to be represented in planning of programs in which they are expected to function. There must be a mutual respect for the opinions of each member of the team, on a co-equal basis, for best results in a community school health program.

I have spent considerable time in trying to establish the fact that there are basic and fundamental relationships between parents, children, the schools, practicing physicians, dentists, and organized public health. I should like to carry the idea of co-operative effort, as exemplified by the "team approach", a bit further by use of illustrations, representing personal experiences.

When I came to Illinois in 1949, I found what I expected to find—that the state had developed the so-called School Examination Law. This plan compared favorably to programs adopted in other states, as a result of stimulation at the National level, and based on co-operative planning by agencies representing health and education. In each instance, whether the school health program is known as the "School Health Code" or "School Examination Law" the state program represented co-operative effort between departments of public instruction, Public Health, organized medicine, and dentistry, and were patterned to some extent after the plans recommended at the national level.

In Illinois "A Basic Plan for Health Education and the School Health Program" was published in 1944, under the joint leadership of the Directors of the Departments of *Public Instruction, Registration and Education, and Public Health.* I understand that these Departments invited consultants from organized medicine and dentistry. Clair Turner, Dr. P.H., who had given leadership to this School Health Program, at the national level, served as special consultant in Illinois. Five years after "A Basic Plan for Health Education and School Health Programs" was published in Illinois I became interested in what had been accomplished under the program. In co-operation with school administrators, we developed what we called "School Health Summary Forms" on which would be recorded data for grades 1, 5, and 9, which most recently had been examined by physicians and dentists. From these summaries, we expected to make some kind of evaluation. Despite the fact that most school principals believed that they had a basic

school health record for every child, the survey revealed some interesting findings. We were particularly interested to learn what percentage of the children in Grades 1, 5, and 9 actually had school health records; how many had had dental examination; the percentage immunized against smallpox, diphtheria, and pertussis. We had hoped to obtain some conclusions relative to physical defects found and corrections made on children brought under professional care as a result of recent examination. (The health records varied so widely on recorded data of physical findings that we decided against trying to evaluate that aspect of the program) We did make the following tabulations in one county:

A) Health Records:
- Grade 1—85.3%
- Grade 5—81.4%
- Grade 9—75.5%

(for the County as a whole based on enrollment for these grades)

B) Dental Health Records:
- Grade 1—72.0%
- Grade 5—72.8%
- Grade 9—51.8%

(for entire County based on enrollment for these grades)

C) Immunizations:

1) Smallpox:
- Grade 1—(28.6-78.6%) County average 52.97%
- Grade 5—(34.1-83.3%) County average 57.4%
- Grade 9—(32.5-65.0%) County average 47.0%

2) Diphtheria:
- Grade 1—(53.0-100%) County average 65.6%
- Grade 5—(31.7-100%) County average 66.3%
- Grade 9—(12.2-78.8%) County average 53.0%

3) Pertussis:*
- Grade 1—(44.4-100%) County average 67.3%
- Grade 5—(39.0-100%) County average 70.4%
- Grade 9—(42.5-85.0%) County average 62.8%

Using the generally accepted standard† for evaluating immunity status, i.e.:

90-100%—Excellent
80-90%—Good
70-80%—Safety Minimum
Below 70%—Below Safety Minimum.

we found that for the county, as a whole, only Grade 5 rated as high as "Safety Minimum" and for only one disease—pertussis. All the other grades under the survey study rated "Below Safety Minimum" for immunizations against smallpox, diphtheria, and pertussis.

In planning this study of school health records, it was agreed that Classroom Health Summary for Grades 1, 5 and 9 would assist in "putting the school health records to work", as a means of improving the School Health Program.

After the survey report was distributed by the Unit School Superintendents to the school principals, four school communities have conducted immunization clinics to improve their immunization status. These clinics were planned jointly between the parents, the schools, and the physicians practicing in those communities. The health department provided the biologics and nursing assistance, on request of the physicians, in the conducting of these immunization clinics. I am not suggesting this procedure as a model for each community in the promotion of its school health program, but rather to show how the members of a school health team can work co-operatively in handling a problem maintaining suitable levels of protection against preventable diseases.

The survey study brought other problems into focus, namely:

1) What can the community do about the 15-20 per cent of children who have no basic health records with medical examination?
2) What can be done about the 15 to 50 per cent of the children who have had no dental examination, or even a health record?
3) What can the community do about parents who have not or will not have their children inoculated against diseases for which there are effective antigens?

It is not the purpose of this paper to raise the philosophical question as to whether the above should be answered for every individual student in every school community. Assuming the trend in school health philosophy to be reasonable and practical, under the "Basic School Health Plan" of Illinois, we would submit these problems to the School Health Team for consideration at the community level. We might ask, "Who in reality is responsible for the health of the school child?" An obvious answer would be, "The Parent". The parent in all instances has not accepted that responsibility for one reason or another. For some children, the services implied in the above questions may be contraindicated for scientific or medical reasons. These may be joint responsibilities for the members of the team: the parent, the school, the physicians, dentists.

In closing, I would like to relate one other instance which portrays a relationship in which the physician is a key figure. It has been my

*Children who have been inoculated with pertussis vaccine or who gave history of having had the disease were considered immune in this tabulation.

†Office of Public Instruction, Illinois: Circular Series No. 81, November, 1953.

observation that all school people feel a definite responsibility for the health and safety of children while in custody of the school. In joint conferences on school health where school people are represented, the problem invariably arises, as to how to handle emergency sickness and accident cases that occur in school. When these emergencies arise, the school personnel feel they must do something. They would prefer to have organized medicine and/or organized public health, representing medicine, to present the schools with some standards to guide them in carrying out their responsibility for the safety of the school child at the time the emergency arises. In a recent conference where this subject was discussed, I stated that, in my opinion, the medical society had some responsibility in helping to formulate some standards which would provide safety for the child and protection for the school—standards and practices which could not be misused by nonmedically trained people in giving first aid care to emergency cases. A school man in the audience took issue with my statement and said that he was opposed to the idea of anyone giving the schools "orders". Perhaps the controversy grew out of the use of terms. Various terms, such as "Standing Orders", "Standard Procedures", or "Recommended Procedures" have been used in referring to the problem of emergency care of sick and injured children in school. On this problem more than any other, organized medicine has a vital interest—and here again the "team" or the Public health approach seems important in maintaining a wholesome relationship.

While many aspects of the Community School Health Program has marked nuisance value from the standpoint of the busy physician, the fact remains that the physician does have a major contribution to make. He should be represented in planning and giving direction and meaning to the School Health Program.

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School age accidents

An interesting report on accidents to school age youngsters was recently released by the statisticians of the Metropolitan Life Insurance Company. It was reported that school age accidents are currently causing about 6,000 deaths each year. Among boys from 5 to 14 years old the loss of life from accidents is seven times that from acute poliomyelitis, and 10 times loss from pneumonia and influenza combined. Among the boys from 10 to 14, accidents take a greater toll of lives than all other causes combined.

Although accidental death is not so common among school age girls as for boys, they account for more than one-fourth of all deaths and outrank every other cause of death in the 5 to 14 age range. As would be expected, motor vehicle mishaps are by far the leading cause of accidental death, accounting for 40 per cent of the total fatalities. It was shown in these studies that about 60 per cent of the children killed by motor vehicles were pedestrians.

Drowning ranked second as a cause of accidental death among these children, causing about 25 per cent of the fatalities. Other causes contributing in appreciable measure to the total are burns and conflagrations, firearms accidents, and falls. Accident prevention constitutes the most important factor in efforts to markedly reduce the number of these fatalities. The report states "since one out of every six of these fatalities occurs in and about the home, it is clear that parents can do much to make the lives of their children safer."

The Role of the Physician in the Pharmaceutical Industry

Irwin C. Winter, Ph.D., M.D.

Dr. Samter: New drugs now appear on the market at an amazing rate. It is imperative for us to know how they are developed, and what precautions are taken before they are released. Dr. Winter, who is confronted with these problems day after day, has accepted our invitation to discuss the steps which precede the presentation of a new compound to physicians at large.

Dr. Winter: In presenting the problems of preparing a new drug for general release, I should like to spend most of my time on the clinical evaluation of that drug. I shall begin, therefore, by defining the role of the full-time physician in the pharmaceutical industry.

However, to digress briefly from that subject, I want to make a point that, I believe, is frequently overlooked — namely, that the function of the pharmaceutical manufacturer is basically the manufacture of pure, stable, reproducible drugs and their distribution. His primary function then is not research, although research is necessary to maintain his competitive position.

Research, then, is only one of the functions of the physician in the pharmaceutical industry. These functions may be summarized as follows:

1. The responsibility for the health of employees, i.e., industrial medicine, similar to that performed in other industries; pre-employment and periodic physical examinations and preventive medicine. To discharge the latter duty properly, the physician must have a thorough knowledge of the health hazards peculiar to his industry.

2. The maintenance of professional relations:

a) Preparation of professional literature designed for the medical profession. The physician ordinarily does not prepare advertising copy although advertising is usually cleared through his office.

b) The answering of professional inquiries from physicians.

c) The supervision of the medical phase of sales training.

I would like to emphasize that the function of "Professional Relations" is of real importance to the profession as a whole and is becoming more so. Twenty years ago we were told that the time lag between a new, worthwhile idea and its general adoption was about 25 years. This, if ever correct, is certainly not the case today. I submit that the promotional efforts of the pharmaceutical industry are in part responsible for the remarkable shortening in this time lag. It seems to me that the universities might recognize and perhaps utilize the enormous effort which our industry puts into what is at least one form of postgraduate education.

3. Research:

Be that as it may, my own personal interest lies in the research functions which the physician in industry can perform. These may be described as:

a) Advice as to the areas where new drugs are needed.

b) Interpretation of laboratory data.

c) Clinical evaluation of new drugs and the continued investigation of drugs which are already on the market.

d) Extension of preliminary clinical data to medical practice.

Director of the Division of Clinical Research, G. D. Searle and Co.

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It might be best to define these "research" functions of the physician in our industry by a brief outline of the steps by which a new drug reaches the market.

First of all, obviously, an idea is required—and such ideas are eagerly accepted from any source. From this stage on, the research department of the pharmaceutical manufacturer functions as a team; within limits, this is largely "directed" research. Based on the "idea", a series of new—or old—chemical compounds may be prepared, "screened" for appropriate activity and lack of toxicity in animals, and those surviving the "screen" submitted to clinical trial. It might be interesting to assess the role of the physician in the scope of the entire program.

The physician should certainly be able to recognize the disease where new drugs are most urgently needed. It is to be kept in mind that not all areas where drugs are needed can be selected for investigation, since even if successful the return on a large investment might be too small to warrant expenditure of company funds. Of course, there is "prestige value" in finding a new drug, even if the number of patients in whom the drug is indicated is small, and "directed" or not, the possibility of at least some degree of freedom of choice is recognized as a necessity for the development of a true research attitude by investigators. Still, any really successful drug not only has to pay its own way, but support the effort involved in the preparation and study of the many other compounds tested and found wanting. A precise estimate of the ratio of unsuccessful agents investigated to successful drugs is impossible; it is certainly many thousands to one.

In view of the wide range of the products which are investigated and distributed by the pharmaceutical industry, a physician associated with it must have a broad knowledge of the various fields of medicine even if that background is largely made up of "library" knowledge. We feel that he should retain and expand this skill by actual care of patients, but opinions differ on this point. Opportunities for the physician vary all the way in different companies from complete responsibility for a service in a nearby general hospital to assignments which require at best dispensary care of fellow employees and sometimes no "clinical" responsibility at all. He may carry on a limited private practice; usually his duties in the industry require his full attention.

The physician also must be proficient in determining the predictability of laboratory data: can the animal experiments be extrapolated to man? If so, to what extent? He must know how a new drug was selected; in other words, he must estimate the ability of the laboratory investigator. Are the latter's assistants competent? Are the analytical data significant? Needless to say there is some error in all experimental methods; so far as possible he should know the statistical laws which control this error.

He should also—and so should the laboratory investigator—be able to recognize when data from laboratory experiments give indication that a newly opened avenue of research may be more interesting and profitable than the original "directed" path—and to give advice on how to follow the new direction of interest.

A research background will facilitate the proper evaluation of these points and training in laboratory research (Ph.D.) often is helpful.

Since clinical trial is my personal responsibility, it represents, for me, the most important and interesting step in the development of a new drug. Such a step must of course be preceded by adequate laboratory tests which indicate probable activity and safety. The extent of such required laboratory tests depends, naturally, upon the characteristics of the drug. In other words, both the laboratory scientist and the clinical investigator must be satisfied with the "adequacy" of the experimental trials.

After the committee on new products has agreed on the decision to try the new agent in humans, the compound may then be given to a "specialist" in the field where the drug is thought to be useful. Such a limited trial adds further information about the safety of the drug for general use and may, if the drug is spectacularly effective, indicate its scope in the treatment of human disease. Furthermore, such trials (repeated in sufficient numbers) may be adequate for submission of the new agent to the Food and Drug Administration for approval, and for its introduction to the profession at large.

Unfortunately, such clinical trials are often not well enough controlled to permit valid comparison with the activity of other compounds of similar chemical structure, or with the ac-

tivity of other drugs, which though chemically unrelated, are used for the same purpose. It may take years, in fact, of general use before the true place of a drug in therapy is established. It is this circumstance which leads to the well known biphasic "curve of papers" in response to new drugs; early enthusiastic reports, followed by less favorable articles, and eventual acceptance of the drug's proper area of utility.

It seems obvious that with more precise information than that provided by the "clinical trial" the time required for this "settling down" process might be materially reduced. We have been slow in applying the known principles of bioassay to the evaluation of a new drug and in designing efficient clinical experiments in accordance with these standards which have long been accepted for basic studies. Several reasons, of course, (ethical, moral, and professional) make it difficult to insist on such a rigid experimental design. It is imperative, for instance, that one should not give a new drug to a patient without a reasonable chance that it will help him. I am certain that other examples which illustrate this difficulty will readily come to your mind. If we know, however, how a new drug affects a given function in animals, if we know how that function is altered in human disease, and if adequate methods for measuring changes in that function in the human exist, it should be possible to design and execute an experiment which would give the information which is necessary to establish the activity of a new drug.

There are two chief reasons why such studies are not carried out more uniformly:

First, they are unpopular, unfashionable, and unpleasant. Whether it is because most of us have been trained to be therapeutic nihilists or some other cause, the study of therapeutics is not highly regarded and the phrase "drug testing" or the even more reprehensible "drug screening" somehow evokes a distinctly unpleasant emotional response on the part of many clinicians. Such a response, and I acknowledge prejudice, does not seem to me to be entirely rational. We all take pride (and are not above a bit of boasting) in the really outstanding advances in therapy which have been made in the past few years. The highly active new drugs which are a part of that advance are *not* placebos, their careless use is *not* without hazard, the conditions under which they are indicated and properly used *must* be carefully delineated and applied, and if new—and needed—agents are to continue to appear "drug screening" under rigidly defined conditions *must* continue.

Perhaps we need a new and more socially acceptable term. We all would like to discover a new therapy ranking with penicillin. It might be pleasant for all of us to earn a Nobel prize. We should remember, however, that research is in large part endless repitition, often drudgery, only rarely highlighted by the great discovery.

A second reason that carefully designed bioassay technics are often omitted is that there aren't enough adequately trained clinical investigators available to use them. There are many adequately trained clinical scientists but there are more therapeutic problems than these men can handle and usually their research programs are already more than adequately filled. Again, the problems of therapeutics are not in many institutions the most popular. The exigencies of obtaining *adequate* research as well as clinical training puts a real barrier, both temporal and financial, in the way of most young men even if therapeutics is appealing to them. A few educational institutions are aware of the problem and are doing something about it. We can hope that more will follow that example.

DISCUSSION

Question: (Name of inquirer not recorded.) What is the fate of drugs which eventually are found to serve no useful purpose?

Answer: They tend to eliminate themselves. If prescriptions fall below a certain level, the manufacturer can no longer afford to produce them. Interestingly enough, prescribing appears to be habit forming: some drugs of known uselessness are prescribed by a surprising number of physicians even after they are withdrawn from the market.

Question: One of the problems in prescribing medication or in recognizing medication which has been prescribed by other physicians is the increasing stream of proprietary mixtures. Actually, most of these mixtures represent a combination of several established chemicals which are not known to have a unique effect when given together. Who decides about the prepa-

ration and distribution of these, I think we can honestly say, "shotgun" formulas?

Answer: Obviously, mixtures of drugs will not be prepared or distributed except upon a significant demand by the medical profession. They are screened like any other compound through the Committee on New Drugs; in fact, they are as a rule subject to the same rigid experimental and clinical tests as new compounds.

Question: Which in your opinion is more important in drug sales, advertising or efficacy of the product?

Answer: Advertising will sell drugs but only for a limited time. The continued acceptance of a drug, the maintenance of sales volume, is certainly dependent upon its effectiveness; and perhaps I should say the lack of anything better in its particular field of application.

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The Extent and Depth of the Retrolental Fibroplasia Problem

ARLINGTON C. KRAUSE, M.D., CHICAGO

RETROLENTAL fibroplasia is a common cause of blindness in children in Illinois and in the United States. It is a recent disease that made its appearance with modern methods of oxygen therapy of premature babies. The incidence of the disease has increased here and abroad during the past 18 years until it has become a major problem of blindness in children.

The disease generally results from the damage to immature retina by exposure to excessive oxygen, particularly of prematures just after birth. The usual form of the disease is severe and leads to a high degree of blindness. This is the ordinary kind of retrolental fibroplasia that is graded into five acute and five scarred types of retinal lesions by the ophthalmologists.

There is no simple way of acquiring information on the incidence of retrolental fibroplasia. As you know we are making a survey of retrolental fibroplasia in the State of Illinois among prematures born in the year 1952. This is a co-operative project that has the assistance of the Illinois Society for the Prevention of Blindness, Bureau of Maternal and Child Health of the State Department of Health, and the many associated medical societies. The year 1952 was chosen as a typical year of birth because retrolental fibroplasia could be reasonably detected and traced.

A preliminary report of this survey is presented here so that we have some idea of the actual incidence. Out of the 205,438 births among residents of Illinois for 1952, there were 14,635 prematures weighing less than 2,501 gm., or 5 pounds 8 ounces. Since retrolental fibroplasia occurs almost entirely in prematures below 2,000 gm., or four pounds 7 ounces and since the overwhelming number of prematures' weight was between 2,000 and 2,500 gm., the upper limit of weight at 2,000 gm. was selected to make the project workable. An unusual effort is being made to trace every child with an eye disease

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From the Division of Ophthalmology, Department of Surgery, University of Chicago.

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who weighs less than 2,000 gm. for 1952. If it is possible everyone of these children is examined by an ophthalmologist for the five stages of retrolental fibroplasia.

Of the group of 4,900 prematures under 2,000 gm. born in 1952, 2,756 survived the first year of life. So far a 78 per cent response of 2,512 survivals has been obtained. Although the report is incomplete and much checking is still necessary, 48 cases of retrolental fibroplasia were found. The per cent of retrolental fibroplasia for the total number of responses, i.e., 1958, was 2.5 per cent or the state, 3.1 per cent for Chicago, and 2.1 per cent for downstate.

The tentative figure of 48 cases for the year 1952 is the lowest number, for more children are to be examined. Twenty-four of these children were born in Chicago and 24 downstate. This census covers retrolental fibroplasia in the severe forms. The mild form of retrolental fibroplasia for 1952 which is not, or only slightly, evident at this time and which obviously cannot be included in the survey may become observable at school age as a myopia, amblyopia, or peripheral anomaly of the retina. Furthermore this survey cannot include those cases which had a reversible retrolental fibroplasia that reverted to a normal eye. So we may say that we expect to have over 60 cases of retrolental fibroplasia with severe eye disease in Illinois for 1952. If one may hazard a reasonable guess then one may say that since 1937 when the first case was seen in Chicago 500 to 600 children are partly or totally blind from retrolental fibroplasia in Illinois and more will follow with evidence of the disease.

The survey has also revealed many other problems of interest to public health departments. In this group of prematures there are a large number of children with physical defects which cripple and handicap them.

The intensive effort of Doctor Rawlings and Doctor Sagen, Mrs. Gray, and the excellent cooperation of many physicians have made this progress report on the survey possible. We feel very appreciative for their sustained interest in this project.

The best estimate is that there are over 10,000 children who are partly or totally blind from retrolental fibroplasia in the United States. About 50 per cent of the blindness in children under 7 years of age is caused by this disease. Other countries have a retrolental fibroplasia problems but it is less than ours.

The Relation of Oxygen to the Etiology

Oxygen therapy is definitely related to the production of retrolental fibroplasia. The evidence that this is true is becoming overwhelming.

Before 1935 oxygen therapy was little used in pediatric nurseries. Furthermore the incubators and bassinets were quite open and added oxygen escaped easily. During the past 20 years oxygen and closed incubators came rapidly into use in premature nurseries especially in the well equipped hospitals and medical centers. Furthermore advanced pediatric practice leaned toward oxygen therapy of prematures with respiratory trouble. This explains why the incidence of retrolental fibroplasia is high in prematures and tends to vary with the hospital.

In those hospitals where oxygen therapy for prematures was started a few years ago in England, Canada, and Australia retrolental fibroplasia appeared. When the oxygen therapy was stopped retrolental fibroplasia disappeared. This has been particularly true here and in Great Britain. The British have severely criticized the American practice of giving supplemental oxygen to prematures.

In this country in the pediatric centers after oxygen concentrations were reduced below 40 per cent the incidence of retrolental fibroplasia was markedly decreased. In some centers no retrolental fibroplasia was seen. This drop in incidence has been observed now in a large number of hospitals in Illinois, the United States, and abroad.

At the symposium on retrolental fibroplasia in New York the preliminary report was given on the controlled study sponsored by the National Health Institute and conducted during the past year in 18 hospitals in the United States. It showed that 25 per cent of the infants weighing less than 1,500 gm. at birth had a permanent visual injury from exposure to high oxygen concentration. Only 6 per cent of the premature infants under curtailed oxygen concentrations had permanent damage. High amounts of oxygen given over a short period of time resulted frequently in retinal lesions. The mortality rates of the two groups were insignificant. Thus the clinical evidence leaves no

doubt that excessive oxygen produces retrolental fibroplasia.

The laboratory investigations on oxygen confirms the experience of the clinic. The lesions produced in kittens, puppies, rats, and mice on excessive oxygen are comparable to those occurring in prematures. In England, Ashton observed that oxygen closed or obliterated the growing blood vessels of the retina of the newborn animals. Hemorrhages and retinal detachment followed. By decreasing the oxygen after a short exposure the vessels reopened. Long high concentrations gave irreversible lesions. This experience was confirmed by American and Scandinavian investigators.

The reason why the retinas of early prematures are affected is that the retinal vessels are rapidly forming from optic nerve at this age and are easily damaged by excessive oxygen. The newborn animals have undeveloped retinal vessels in the stage similar to those of the premature infant. When the vessels are well developed as in the full term child they are scarcely affected by the high amounts of oxygen used therapeutically on prematures. Again there seems to be no doubt about the relationship of oxygen to retrolental fibroplasia.

Prevention of Retrolental Fibroplasia

The inquiry is raised whether retrolental fibroplasia can be eliminated entirely. The following comments can be made.

1. With the oxygen concentrations kept below 40 per cent the indications are that only reversible retinal lesions may occur and the severe form is not seen. Minimal vascular lesions may occur in a few infants. In some hospitals no retrolental fibroplasia has been observed since the reduction of oxygen. A 35 per cent concentration of oxygen seems to be the upper limit of safe tolerance.

2. So far as it can be determined in about one out of 1000 cases of severe retrolental fibroplasia, the disease has occurred in infants not exposed to oxygen. This number of cases is insignificant. The disease is rare in full term infants.

3. The question arises whether oxygen therapy affects the survival rate of newborn with anoxia. The controlled study of the 18 hospitals under the National Health Institutes and the National Society of Prevention of Blindness program show that the difference in the survival rate was not significant between the low and high oxygen group. This also has been true in other hospitals with controlled groups of infants with and without oxygen therapy. The answer to this question is that oxygen is rarely the determining factor for survival of the infant.

4. Oxygen therapy still has a place in treatment of anoxia of prematures. The trend of opinion now is against the indiscriminate routine use of oxygen. It is given for cyanosis and respiratory distress and not merely for irregular or periodical respirations. As soon as symptoms are relieved oxygen therapy is discontinued. The New York State Health Department has recommended no routine oxygen therapy for premature babies.

5. If past experience can be applied then oxygen therapy is best given where it is carefully controlled. If the oxygen concentration is 35 per cent it is 75 per cent above normal, if it is 40 per cent it is 100 per cent above normal. There seems to be reasonable maximal concentration at 35 per cent oxygen. High concentrations of oxygen or prolonged exposure immediately after the premature child is born produce the most severe damage to the eye.

Even with the present type of improved incubators and procedures for adding oxygen it is difficult to control the concentration of oxygen. The method of giving a certain number of liters per minute has worked poorly. The use of the oxygen analyzer for the measurement of oxygen gives a better control but it commonly leads to a false sense of security. The best method which requires the least care is the use of cylinders of 35 per cent oxygen and 65 per cent nitrogen. No matter how much gas is used the concentration cannot be over 35 per cent oxygen. This is the procedure that is recommended by those who have applied it here and abroad. There should be no routine oxygen therapy.

From now on anyone who is responsible for oxygen therapy of premature infants must be extremely cautious about the use of oxygen.

Treatment

There is no specific medical treatment for retrolental fibroplasia. Vitamins, roentgen ray, radium, ACTH, and cortisone have no useful effect on the course of the disease. Surgical procedures for glaucoma, and on the membranes and retinal detachment rarely are beneficial. It is not a ques-

tion of treatment and cure but prevention of the disease.

The Future of the Child with Retrolental Fibroplasia

The treatment of a child blind with retrolental fibroplasia does not end with diagnosis. In the early months and years of the life of the child the course of his development and his place in society is determined. The parents need continued help, particularly at this time, on the adjustment of the child to the family and environment. The parents have the heavy responsibility of raising a blind child. If the child is not stimulated and treated as a normal child early in life the damage which is done may be permanent or only partly corrected. There is no need for a child afflicted only with blindness from retrolental fibroplasia to be retarded. Under optimal circumstances the child can grow to an independent adulthood only limited by his innate capabilities.

The way to prevent mental, physical, and social retardation of the child is to use modern information and experience on the growth and development of the blind child in his family and in society. This is done at best by the co-operative counseling and aid from the proper agencies in the community. It begins soon after the diagnosis is made by appropriate consultations with the parents. It continues into the preschool period. The blind child who has been well developed can take his place in the regular nursery school with sighted children because blindness in itself is not the determining factor in the child's development. Failure to provide for the evolution of a healthy personality leads to a gross retardation and the child may end in a state institution. At the state institutions there are 58 children with retrolental fibroplasia if those who died are not included. The Dixon State School, at Dixon, has 13; Lincoln State School, Lincoln, has 11, and Illinois Braille and Sight Saving School, Jacksonville, has 34 from 6 to 12 years old. For 1955 in the Chicago public schools there are 51 blind and 19 partially sighted children with a diagnosis of retrolental fibroplasia.

We are trying in Illinois to have the child become an independent citizen. We know this can be done for most blind children with retrolental fibroplasia. Fortunately in Chicago and Illinois we have three unusual advisory services for blind children. One is the annual Institute for Parents of Preschool Blind Children living in Illinois who are over 3 years of age. Parents who are interested may write for information to: Miss Margaret Kennedy, Division of Child Welfare, 628 East Adams St., Springfield.

The second is a society which is active in retrolental fibroplasia — The Parents of the Blind, Inc. The secretary is: Mrs. Max Guber, 5633 South Drexel Av., Chicago 37.

Third. Miss Norris with her associates of the Preschool Blind Child Project of the University of Chicago has worked closely with the Child Welfare Division of the State of Illinois. For many years several hundred cases of retrolental fibroplasia have been followed almost from birth. Dr. Halstead and this group of investigators will have a book published shortly on what can be done about the children who are blind from retrolental fibroplasia.

Conclusion

The answer to the problem of retrolental fibroplasia at the present time seems to be, first, preventive. I would recommend that, if oxygen therapy is necessary, the oxygen be used from cylinders which contain only 35 per cent oxygen and 65 per cent nitrogen and that oxygen should not be given routinely but only when its use can be justified, Second, I would advise that the parents of the blind infant with retrolental fibroplasia have a complete medical evaluation of the child and the necessary expert guidance for the continuous mental and physical development begun at once.

This is the one disease that began and can be prevented in the short space of half a generation. The wave of maximal incidence has passed. In the future new cases of blindness from retrolental fibroplasia should be a rarity. From now on the extent and depth of the problem of retrolental fibroplasia depends upon us as physicians.

COOK COUNTY HOSPITAL CASE RECORDS

Massive Inversion of the T Wave

Edwin E. Golberg, M.D., Harold B. Shrifter, M.D., and L. Feldman, M.D., F.A.C.P., Chicago

THE rarity of massive T wave inversions has been reported in the literature. At Sea View Hospital, New York, Silverman and Goodman[1] found only one case in 30,000 electrocardiograms. In this case there was an inverted T wave measuring 7 mm. in lead 1 and 14 mm. in lead CF4 with a remarkably prolonged QT interval of 0.66 sec. Ippolito and Blier[2] recently reported three cases of massive T wave inversion. The deepest T wave they recorded was 25 mm. in lead V4. Woods and Wolferth[3] observed an inverted T wave in lead V5 of 19 mm. in a case of myocardial infarction, and an inverted T wave of 13 mm. in lead V5 in a presumably normal college student. Fox, Weaver and March[4] recorded a case of Wolff-Parkinson-White syndrome in which an inverted T wave of 15 mm. in lead III occurred following the intravenous administration of 500 mgm. of Pronestyl (procaine amide).

The following is another case of massive T wave inversion which presents some unique characteristics.

A 70-year old, white, Polish female was admitted to Cook County Hospital on July 26, 1954 with the admitting room diagnosis of a "possible coronary occlusion." The patient was confused, agitated, and disoriented, and because of a language barrier an adequate history was difficult to obtain. She apparently was in good health until a day and a half prior to admission at which time she noticed the sudden onset of "stiffness" in both arms and a "choking" pain in the anterior chest. She was evidently in such respiratory distress that the pulmotor squad of the Fire Department was called to administer oxygen. She also complained of vomiting during this acute episode.

Physical examination revealed a dyspneic, well developed, obese white female. Her temperature was 98.6 degrees F.; respiration, 28 per minute; blood pressure, systolic 154 and diastolic 80. The apical rate was 100 and irregularly irregular, with no pulse deficit. There were bilateral cataracts and the fundi could not be visualized. The neck was tender to palpation with minimal venous distention. The chest was barrel shaped, and the breath sounds were markedly diminished with crepitant rales in both bases. Percussion of the heart was inadequate because of emphysema. P2 was equal to A2. The tones were distant at the base. There was a soft systolic murmur, grade 1, at the apex. The liver was palpable one to two finger-breadths below the costal margin and tender. There was one plus pitting edema of the ankles. Pulsations of the dorsal pedis arteries were present bilaterally. The deep tendon reflexes were hypoactive.

Admission urine was normal with a specific gravity of 1:020 with two to three white blood cells and three to four red blood cells per high

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power field in the sediment. Examination of the blood revealed a hemoglobin of 75 per cent; red blood cells, 4.56 million per cubic mm.; white blood cells, 8,500 per cubic mm.; with a normal differential count. The platelets were adequate in number. The erythrocyte sedimentation rate was 23 mm. per hour and hematocrit 43 per cent. Repeat white blood cell count four days later was 11,000 per cubic mm. Serology was negative. The blood chemistries on admission were as follows: non-protein nitrogen, 36 mg. per cent; total protein, 6.6 grams per cent; serum chlorides, 98 meq. per liter; serum sodium, 128 meq. per liter; serum potassium, 3.7 meq. per liter; and, total cholesterol 200 mg. per cent.

Roentgenogram of the chest revealed the transverse cardiac diameter to be increased with prominence of the left ventricular segment. Calcifications were noted within the descending arch of the aorta. The lung fields revealed some increase in bronchovascular markings. At this time the electrocardiogram (Figure 1) revealed a left axis shift and flutter-fibrillation with a ventricular response of 120. There were deep T wave inversions in leads I, II, AVL, V2, V3, V4, V5, and V6, with the greatest negativity present in V4 and measuring 21 mm.

The patient was placed on a low salt diet, digitalized, and given intramuscular mercuhydrin and she improved. From the third to the sixth hospital day, her temperature ranged from 100.2 degrees to 100.8 degrees F., finally returning to normal on intramuscular penicillin, 600,000 units daily. She continued to do well until her 12th hospital day, when she complained of sudden pain in the right foot and leg. At this time the right foot and leg were noted to be cold and blanched, and pulsations were totally absent below the popliteal artery. Lumbar sympathetic blocks were performed, and papaverine [grains one and a half, three times daily] was given but with little response. Anticoagulants were started but from this point the patient's course rapidly went downhill and she expired 30 days after her admission to the hospital. No autopsy was allowed. Five days prior to death an electrocardiogram (Figure 2) revealed a left axis shift, digitalis effect, and flutter-fibrillation with a ventricular response of 110. The T waves inverted in leads I, II, III, VI, V2, V3, V4, V5, V6 and in AVF, but did not show the massive T wave inversions that were seen in Figure 1.

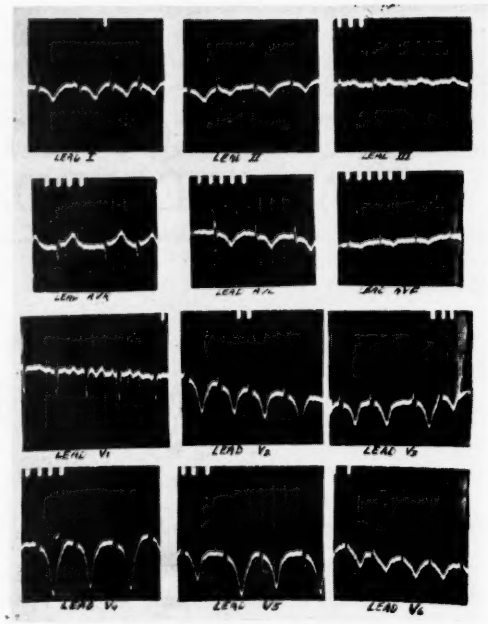

Figure 1. Electrocardiogram taken on July 26, 1954 (on admission) showing flutter-fibrillation and massive T wave inversion.

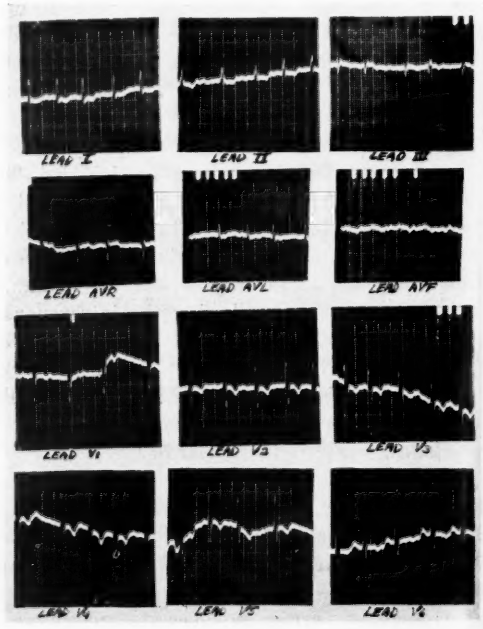

Figure 2. Electrocardiogram taken on August 20, 1954 (five days before death) showing flutter-fibrillation with reversion of T waves to the usual pattern of myocardial ischemia.

The past history revealed that the patient had been hospitalized five years ago at which time her main complaints were shortness of breath, ankle edema, and paroxysmal nocturnal dyspnea of six months' duration. Physical examination at that time revealed a dyspneic, white female. Her blood pressure was 164 systolic, and 112 diastolic. The pulse and apical rates were 92 and irregularly irregular. On percussion the heart was enlarged to the left with a hypertensive contour. The lungs showed bilateral basal congestion; there was venous distension of the neck, and the liver was three finger-breadths below the costal margin and tender. There was two plus pedal edema. The electrocardiogram (Figure 3) revealed left axis shift and a flutter-fibrillation with a ventricular response of 72. She was placed on a low salt diet, given mercurhydrin, and digitalized. After eight days she was discharged from the hospital fully compensated, with a diagnosis of hypertensive heart disease in failure. The patient was seen periodically as an out-patient in our cardiac clinic and remained adequately compensated and in good electrolyte balance until her present admission.

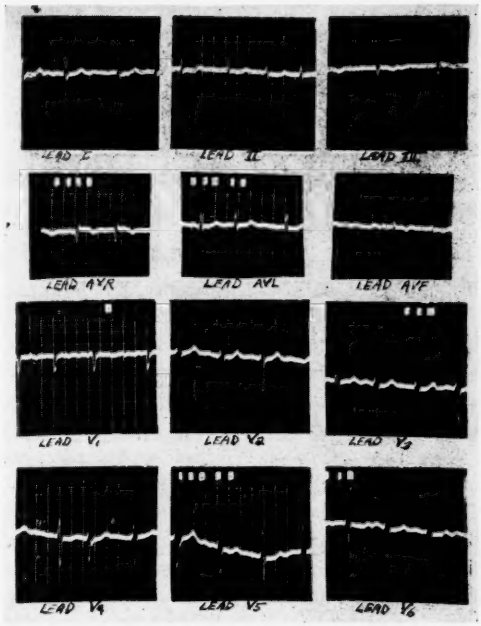

Figure 3. Electrocardiogram taken March 5, 1949 (five years before present hospital admission) showing flutter-fibrillation.

Discussion

T wave inversions are one of the most common abnormalities found in electrocardiography. Unlike the QRS complex, the duration, direction, and contour of the T wave is markedly influenced by factors changing its rate of spread, or its time of onset in relation to the polarity and activity of the surrounding areas of myocardium. In addition, it has been shown that most of the conditions which cause an alteration of the recovery process are confined to localized areas of heart muscle and do not usually affect the myocardium as a whole.[5]

Thus, abnormal T waves can be seen in a large number of conditions in which there is a change — either physiological or pathological or both — in repolarization of the ventricle. Such changes are commonly seen in the following conditions:

1) Myocardial ischemia either absolute or relative:
   (a) emotion
   (b) overactivity of the heart
   (c) smoking
   (d) ingestion of cold water
   (e) reflex
2) Position of the heart
3) Inflammation:
   (a) pericarditis
   (b) myocarditis
4) Injury
5) Drugs:
   (a) digitalis
   (b) quinidine
   (c) pronestyl
6) Electrolyte imbalance:
   (a) hypopotassemia
   (b) hypocalcemia
7) Non-specific

Massive T wave inversions have been reported in three of the above conditions.

A. Myocardial ischemia[1,2]

B. Therapy with pronestyl[4]

C. Non-specific (normal college student[3].

Ippolito and Blier[2] in a recent review of massive T wave inversions, state that coronary insufficiency and a slow ventricular rate are prerequisites for the occurrence of this phenomenon and that such cases are associated with prolongation of the QT interval. They remark further that "if the slow ventricular rate and the presence of coronary insufficiency are etiologically related, then the following may perhaps be stated

with hesitation. The repolarization of a locally damaged heart may be delayed if the intraventricular volume is increased (prolonged diastole) and intraventricular pressure built up."

The presence of a slow ventricular response in all the reported cases to date has prompted Ippolito and Blier to the conclusion that the vagus may play some role in the mechanism of massive T wave inversion.

The actual size of the inverted T wave is difficult to explain with certainty, but is apparently related to the volume of ischemic myocardium[6]. Changes in the serum electrolytes[8], particularly potassium, may influence inversion of the T waves. The area of the QRS is also related to the extent of the inversion of the T wave[4].

Our case manifests neither bradycardia nor exceptional prolongation of the QT interval. Indeed, the case we are reporting shows a rather rapid ventricular response in auricular fibrillation, with massive T wave inversion, to the extent of a 21 mm. inverted T wave in lead V4. This is most unusual, for it has been shown that the negativity of the T wave in cases of auricular fibrillation and flutter is increased if the preceding diastole is lengthened[8]. Our patient undoubtedly had myocardial ischemia as evidenced by her persistently abnormal T wave changes while in the hospital. It is interesting to observe that the massive T wave inversions persisted for only a short period and then reverted to the more usual T wave changes seen in myocardial ischemia. The lability of massive T wave inversions is evidently not uncommon and is probably related in part to the degree and time period of ischemia.

So far as we can determine, the predominant cause of massive T wave inversion in the case we are reporting is myocardial ischemia; for it is apparent that neither slow ventricular response nor vagal influences could account for our patient's abnormal electrocardiograms. We do not think that the volume of the QRS were responsible for these changes, as the T wave inversions were seen to extend to the epicardial surface of the right ventricle and there is no evidence of right ventricular hypertrophy.

Summary

The literature on massive T wave inversion is reviewed and a case is reported which did not show bradycardia. This had previously been thought to be one of the main charcteristics of massive T wave inversion. Evidently the only factor required to cause this abnormality is myocardial insufficiency.

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PATHOLOGY CONFERENCES

Edwin F. Hirsch, Department Editor

1. Friedreich's ataxia complicated by chronic fibroplastic myocarditis.
2. Perforation of a peptic ulcer of the stomach and sudden death.

EDWIN F. HIRSCH, M.D., CHICAGO

Case 1. Friedreich's ataxia complicated by chronic fibroplastic myocarditis.

A young white woman, aged 16 years, entered St. Luke's Hospital in the care of Doctor Roland P. Mackay on December 7, 1953 and died on the 15th. She had had spasticity of the legs with positive Babinski reflexes since the age of seven years. She attended school and walked until the summer of 1953. At that time she gained considerable weight and tired easily with moderate exercise. For about ten days before entering the hospital she felt weak, did not attend school, and then was observed to lift her legs with her hands while walking. She spoke very little and only with much effort. Two days before admission she became paraplegic and her state of consciousness decreased.

When examined at the hospital, the pupils reacted to light but not to accommodation. There was no nystagmus. Her temperature was 100.2° F., the pulse was 120 and the respirations were 22 per minute. The blood pressure was 100/? mms. Hg.; the heart had a sinus tachycardia, the tones were strong and without murmurs; the legs had a slight pitting edema. The lower extremities were paraplegic and in spastic contraction, the arms had almost normal strength. The knee jerks were present with reenforcement, the arm jerks were absent. The Babinski reflexes were strongly positive on both sides. The neck was rigid. Sensory tests were not done.

The blood had 4,500,000 erythrocytes and 14,800 leukocytes per cubic mm. and 13.8 gms. percent hemoglobin. The non-protein nitrogen of the blood was 48 mgms., the sugar 119 mgms. percent. The spinal fluid had 26 mgms. percent protein. The urine contained considerable albumin, a few erythrocytes and leukocytes. Roentgen films of the chest and cervical spine disclosed nothing unusual. An electrocardiogram had sinus tachycardia and abnormal features resembling those of rheumatic heart disease.

On December 9th the patient was lethargic, her temperature was 103.4°F. and the fever persisted despite antibiotics. The spinal fluid on December 14th had an initial pressure of 180 mms. of water, and a closing pressure of 150; it contained a few erythrocytes and 22 mgms. percent protein; the Pandy was negative, the colloidal gold curve was 111 000 000. The face

From the Henry Baird Favill Laboratory of St. Luke's Hospital, Chicago.

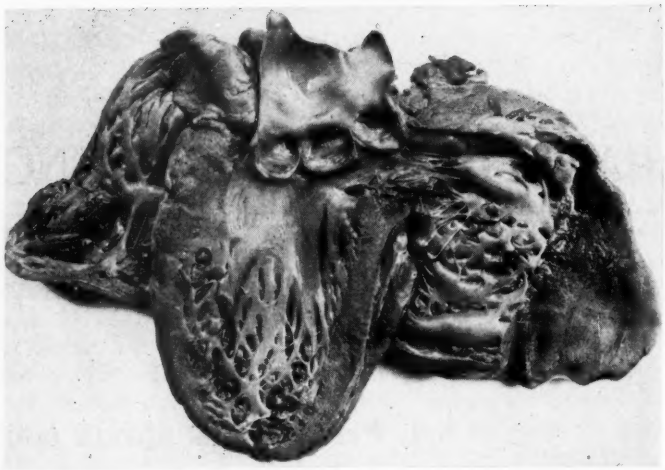

Figure 1. Photograph illustrating the multiple mural thrombi on the lining of the left ventricle of the heart with chronic fibroplastic myocarditis.

and legs were edematous. Death occurred on December 15, 1953.

The significant portions of the anatomic diagnosis of the complete necropsy are:

Chronic fibrous myocarditis;
multiple mural thrombi of the lining of the left ventricle of the heart;
Dilated chambers of the heart;
Anasarca, ascites and bilateral hydrothorax;
Hyperemia and edema of the lungs;
Chronic passive hyperemia of the liver and spleen; etc.

The body of this young woman weighed 100 pounds and was 156 cms. long. There was a marked generalized edema, especially of the lower extremities. The abdomen contained 250 cc. of a clear yellow fluid, each pleural space 300 cc. The edematous and hyperemic right lung weighed 540 gms., the left 470 gms. The heart weighed 310 gms. The pulmonic and tricuspid valves had no significant changes. The chamber of the left ventricle was dilated and between the columnae carneae in the lining of the lateral wall were several adherent gray red thrombi ranging to 6-8 mms. diameter. More of these were on the septal endocardium (Figure 1). The leaflets of the mitral and aortic valves had no significant changes. The coronary arteries had a smooth lining. The myocardium of the lateral wall of the left ventricle and of the septum had brown fibrillar tissues mottled with gray scars.

The right kidney weighed 130 gms., the left 140 gms.; the liver weighed 940 gms., the spleen 100 gms. These viscera had the changes of a chronic passive hyperemia. The tissues of the gastro-intestinal tract and other viscera of the trunk, the structures of the pelvis, and of the neck had nothing significant.

The brain with the upper half of the dura weighed 1040 gms. The spinal fluid was clear, the leptomeninges were thin, the cerebral and cerebellar hemispheres were symmetrical. There were no gross lesions. The entire spinal cord was removed. The dural and cranial sinuses, both middle ears and the hypophysis had no significant changes. Histological examination of the heart muscle demonstrated a diffuse growth of fibrous tissue in the myocardium with replacement and marked atrophy of the muscle fibers. Exudate cells in these tissues were minimal in amount.

After fixation in a solution of formaldehyde further gross and microscopic examinations of the brain and spinal cord were made. Gross sections of the brain, the pons, and the upper portion of the spinal cord, and of the spinal cord itself afforded no diagnostic information. Sections of the brain and those from many levels of the spinal cord were stained by seven specific methods. In the lumbar region, the posterior and lateral columns of the spinal cord had degenerative changes such as occur with a Friedreich's ataxia syndrome.

COMMENT

The Friedreich's ataxia syndrome of this young woman extending from early youth, became complicated by a chronic progressive fibroplastic myocarditis, which was the more seri-

ous life hazard. The Friedreich's ataxia is considered to have a familial causal factor, the chronic myocarditis an infectious. This form of myocarditis is an insidious disease, occurs commonly in young adults, and seems to be a chronic progressive cardiac disorder.

Case 2. Perforation of a peptic ulcer of the stomach and sudden death.

A negress aged 53 years entered St. Luke's Hospital in the care of Doctor H. I. Meyer at 10:15 A.M. on December 18, 1953 and died seven hours and 15 minutes later. Eight years before, she was told that she had a high blood pressure. For five months she had epigastric pain 1 to 2 hours after each meal, and for a week this discomfort had been constant. While in the examining room during the time her blood pressure was being measured, she had an acute attack of epigastric pain. Her temperature was 98.6°F., the pulse was 114 and the respirations were 20 per minute. The blood had 5,000,000 erythrocytes and 6,200 leukocytes per c.mm. and 14.6 gms. percent hemoglobin. The straw colored urine had a pH of 7.5 and contained 40 mgms. percent albumin. At 12:30 her blood pressure was 65/0 mms. Hg., the heart rate was 160 per minute with marked compensatory pauses. The pulse deficit at times was 1:3. Bowel sounds were practically absent, and the abdominal tenderness seemed greater in the lower quadrants. At 3:00 P.M. brown fluids were aspirated from the stomach and contained occult blood. An electrocardiogram had occasional premature systoles. The patient did not recover from shock, constantly complained of abdominal pain and died. Myocardial infarction was considered to be the cause of death.

The significant parts of the anatomic diagnosis of the complete necropsy are: Perforated chronic peptic ulcer of the pylorus of the stomach; Generalized acute serofibrinous peritonitis; Marked muscular hypertrophy and dilatation of the lumen of the stomach; etc.

The body of this negress weighed 180 pounds and was 172 cms. long. The abdomen contained 2500 cc. of dark brown fluid, and everywhere the peritoneum was markedly hyperemic and

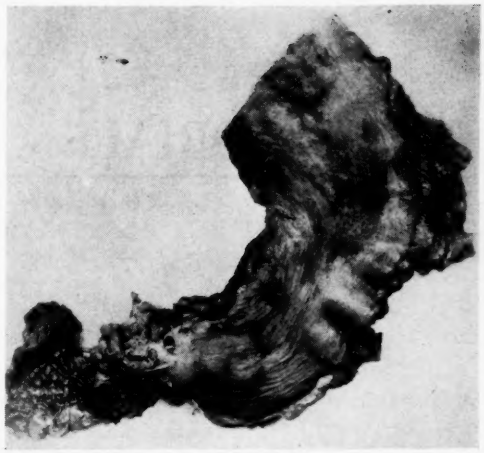

Figure 2. Photograph illustrating the perforated peptic ulcer in the anterior wall of the pylorus of the stomach.

covered with membranous plaques of fibrin. The front wall of the stomach near the pyloric sphincter and toward the lesser curvature had a round perforation 1 cm. in diam. (Figure 2) and on the mucosal surface opposite was a peptic ulcer 1.4 cms. in diam. The hugely dilated stomach contained a large amount of brown fluid and the opening of the pylorus into the duodenum was narrowed to an inside diam. of 1.8 cms. The routine examination of the heart, lungs, liver, kidneys, spleen and other viscera of the trunk, the neck and the head disclosed only changes associated with ageing of the tissues. Histological preparations through several levels of the ulcer demonstrated necrosis and inflammatory tissues, but none cancerous.

COMMENT

This acute episode of perforation of a peptic ulcer of the stomach with the escape into the peritoneum of large amounts of gastric fluid and the associated profound clinical shock in a patient practically under medical observation throughout, illustrate the seriousness of perforation of a gastric ulcer. The clinical manifestations and the rapidity with which death occurred suggested even cardiac infarction. The necropsy disclosed the cause of the confusing symptoms.

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EDITORIALS

C-reactive protein

The presence or absence of C-reactive protein in serum is becoming a popular test for a variety of infections, including rheumatic fever. In this respect, it shares a place with the white blood count and sedimentation rate in diagnosis.

Tillett and Francis observed that the serum of patients with lobar pneumonia precipitated when mixed with a solution of p-saccharide of pneumococcus. The precipitate was positive during the acute stage but disappeared after the crisis.

Initially, the active substance was regarded as a specific antibody to the pneumococcus but subsequent study demonstrated that the reaction was not limited to pneumococcal disorders; it took place also during the acute phase of streptococcal and staphylococcal infections and of rheumatic fever.

Because the test (C.R.P.) is a sensitive indicator of rheumatic activity, it is useful in the management of the rheumatic fever patient. The result is positive during the active stage and may become negative before the sedimentation rate returns to normal.

Its relationship to treatment is interesting. During treatment with cortisone or related steroid, the C. R. P. becomes negative if a good response takes place. Failure to obtain this response is a sign that the dosage is not large enough to suppress rheumatic activity.

After the medication is discontinued the C-reactive protein appears in the serum if there is a remission of the disease. There is no reversal of the reaction with aspirin until the clinical manifestations of the disease subside.

But a low grade rheumatic process is not strong enough to make C-reactive proteins form. This explains why the test is negative in chorea, erythema marginatum, and subcutaneous nodules. It usually is negative in other collagen diseases including disseminated lupus erythematosis, dermatomyositis, and scleroderma. The same applies to viral hepatitis. In this respect, it is of more value when positive than when negative.

A positive reaction generally occurs during the inflammatory phase of gout and rheumatoid arthritis; it is negative during the afebrile stages. C. R. P. also appear during the early stages of a mild upper respiratory infection but disappear promptly at the end of the cold. If the reaction persists, there is a possibility of rheumatic fever.

The following experiment demonstrated this point: When serum was obtained from a group of hemolytic strep infections, the test was positive in 57 per cent of patients who did not develop complications; in 75 per cent of those with purulent complications; and in 97 per cent of those who developed rheumatic fever.

The C-reactive protein test also is of value in acute myocardial infarction. It is negative in patients with angina pectoris but becomes positive within 36 hours after an attack of coronary occlusion. Following commissurotomy for rheumatic mitral stenosis, the test became positive in eight out of 13 patients and remained so for eight weeks.

Pathologic diagnostic service

For several years the Bureau of Cancer Control of the Illinois Department of Public Health has financially supported a pathologic diagnostic service. The program provides facilities for physicians and dentists whereby they may submit biopsy specimens for examinations without cost, from patients who cannot afford to pay for such service and in whom a malignant condition is suspected. Containers and request forms for the submission of such specimens may be obtained by writing the Bureau of Cancer Control, Illinois Department of Public Health, Springfield, Illinois. In order that the patient not be charged for the service it is important that the physician sign his name to the certification on the request form where it states that the person cannot afford to pay.

Biopsy specimens for standard tissue examination may be mailed or brought to the State-supported cancer clinics in the following locations, where they will be processed by the pathologist of the respective clinic.

BLOOMINGTON,
Mennonite Hospital (c)
CANTON,
Graham Hospital (c)
CARBONDALE,
Doctors Hospital (c)
CENTRALIA,
St. Mary's Hospital (c)
CHAMPAIGN,
Burnham City Hospital (c)
DANVILLE,
St. Elizabeth's Hospital (c)
DuQUOIN,
Marshall Browning Hospital
EAST ST. LOUIS,
Christian Welfare Hospital (c)
ELGIN,
Sherman Hospital (c)
EVANSTON,
Evanston Hospital (c)
St. Francis Hospital (c)
EVERGREEN PARK,
Little Company of Mary Hospital (c)
FAIRFIELD,
Fairfield Memorial Hospital (c)
HERRIN,
Herrin Hospital (c)
HILLSBORO,
Hillsboro Hospital (c)
JACKSONVILLE,
Passavant Memorial Hospital (c)
JOLIET,
St. Joseph's Hospital (c)
MATTOON,
Memorial Hospital
MT. VERNON,
Mt. Vernon State Tuberculosis San.
OTTAWA,
Ryburn Memorial Hospital (c)
PEORIA,
Methodist Hospital (c)
ROCKFORD,
St. Anthony's Hospital (c)
SAVANNA,
Savanna City Hospital (c)
SPRINGFIELD,
Memorial Hospital (c)
WAUKEGAN,
Victory Memorial Hospital (c)

A cytology diagnostic service for patients who cannot afford to pay is being supported by us in a small way because of budget limitations, and *is not on a mailing basis.* Any physician who has such a patient and wishes this type of examination may obtain it without cost to the patient by referring the patient to the cancer clinics listed above marked (c) where the pathologists have indicated that they would be able to provide this service. Here again the referring physician must certify that the patient cannot afford to pay in order that no charge be made.

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A.M.A. study conference

A study conference called by the American Medical Association to consider methods of informing its membership of certain aspects of pending legislation was held in Chicago, October 22. More than 100 representatives of constituent state medical associations, AMA officers, and members of the Board of Trustees participated in discussions and considered approaches for focusing the public's attention upon the AMA's viewpoint.

H. R. 7225, known as the Social Security Amendments of 1955, includes provision for the payment of monthly cash benefits to the permanently and totally disabled at age 50. The bill, passed by the House of Representatives last

summer, will come before the Senate Finance Committee for public hearings early in the next session of Congress.

Comments of participants were solicited at the Chicago meeting and AMA officers, and trustees are currently studying these opinions. Dr. George F. Lull, AMA Secretary and General Manager, urged that all medical society representatives who attended the conference send further comments, suggestions or criticisms to AMA headquarters. He pointed out that the Association is studying the consensus of the state representatives who attended the conference and will proceed in a manner consistent with the views of the majority.

Giving the official address of welcome at the conference, Dr. Gunnar Gundersen, chairman of the Board of Trustees, said:

"Our great aim should be to join with other groups and organizations, with the press and other communications media, and with responsible leaders of both political parties to separate Social Security and politics. The AMA believes that problems of Social Security should be solved on the basis of sound judgment, an objective analysis of facts, a humane attitude toward human suffering—and not on the basis of political expediency."

Dr. Elmer Hess, AMA president, emphasized that the program to promote a better Social Security system must be considered a "long range effort," looking forward to 1958, 1960, even to 1962. He also stressed that study of social security legislation will require close co-operation and mutual activity at the national and local levels.

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New honors for Dr. Telford

Two days after the announcement that Dr. Elbridge W. Telford of DeKalb had been selected by the Illinois State Medical Society as the "General Practitioner for 1956" he was informed that he was the recipient of one of the highest honors to be granted by the Korean Government.

Dr. Telford was awarded the Korean Distinguished Military Service Medal for his work in setting up an efficient medical department among Korean troops while serving as division surgeon of the 45th United States Division.

This honor followed two previous high ones—the United States Bronze Medal and the Philippine Legion of Honor—for his Korean services.

Elbridge W. Telford, M.D.

Dr. Telford has a distinguished military record. While attending Northwestern University Medical School, he served in the Illinois National Guard and was on active duty on numerous occasions. After entering practice in 1928, he became a member of the Officers' Reserve Corps.

At the first sign of war clouds in 1941, he joined the 33rd Division as a first lieutenant in the Medical Corps. He served in the Pacific Theater and then was assigned to accompany Gen. Patton's 3rd Army across Europe. His hospital unit had one of the smallest mortality rates in the war. He was released in 1945 as a major.

In 1947, Dr. Telford helped to organize the medical staff of the 44th Division. With the outbreak of the Korean war, he was assigned to that unit as division surgeon and lieutenant colonel.

Due to the need for medical personnel in Korea, he was sent on ahead to become the division surgeon of the 45th Division, then already in action. Ten of his 14½ months in Korea were spent in combat areas.

Besides organizing one of the best medical units among any United States division, he helped to establish efficient medical organizations among Korean and Philippine troops.

The Illinois State Medical Society's citation will be presented to Dr. Telford at the annual meeting of the Society in May. Fifty-four years old, he is one of the youngest of the eight physicians to receive this award of colleagues. He has an outstanding record as a general practitioner in De Kalb in the intervals when he was not serving his country in foreign lands.

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Governor vetoes proposed revision (Senate Bill 247) of the Coroners Act of 1874

Senate Bills 247 and 248 introduced by Senator Albert Scott of Canton and offering revisions of the archaic Coroner's Act of 1874, passed the Senate by a vote of 29 to 5, and on the final day of the last General Assembly, June 30, 1955 were voted through the House of Representatives 94 to 7 and 94 to 6, respectively. Members of the Illinois State Medical Society, representatives of the Illinois Coroners Association, and advisors from the Illinois Department of Public Health had met in preliminary discussions and joined their conclusions in the final draft of these bills.

Senate Bill 247 defined more clearly the cases of death that belong to the jurisdiction of the Coroner; it specified coroner's juries only for cases of suicide, homicide, and accidental death; and it provided that the medical examinations be made by physicians licensed to practice medicine in all of its branches, and wherever possible with special training in pathology. It did not require that these physicians be certified pathologists.

Senate Bill 248, a companion to Senate Bill 247, afforded assistance to the coroner of each down-state county in securing a qualified physician to make the medical examination of his cases. It did so by arranging for these appointments through the Director of the State Public Health Department in consultation with the elected Coroner of a down-state county. Coroners and the Director of Public Health, in this plan, could thus cooperate in improving the medical examinations of coroner cases through the State, and groups of counties would benefit where each alone could have difficulty to obtain a qualified examiner. Senate Bill 248 further included the appointment of an Advisory Board by the Governor to advise the Director of Public Health and the coroners of the counties in the development and improvement of this service. This Advisory Board of nine members was constituted to include three physicians, three elected coroners, and three laymen acquainted with the problems of forensic medicine.

Governor Stratton on July 7th signed S. B. 248, but later vetoed S. B. 247. The Illinois State Medical Society, other Medical organizations and lay groups were disappointed with his veto. This veto was on the basis that "a number of pathologists who would not ordinarily be employed by the coroners would be placed on county payrolls by appointment through one of the State departments. The result would be effectively to destroy county control over the cost and expense of the coroner's office." This interpretation, however, is not in full agreement with the specific directives covering the qualifications and appointment of coroner's physicians in S. B. 247. The details of this agreement are mentioned in the appended answer to the governor's friendly letter containing his veto message.

After Senate Bills 247 and 248 had been approved by the General Assembly, the following three letters were exchanged in correspondence with Governor William G. Stratton:

JULY 1, 1955

Honorable William G. Stratton,
Governor of the State of Illinois,
Springfield, Illinois.
Dear Sir:

On behalf of the Illinois State Medical Society I am writing this letter to urge that you give favorable consideration and approval to Senate Bills 247 and 248. These Bills were passed by the House of Representatives on June 30th, and have been sent to your office. The Bills propose a much needed revision of the Coroner's Act of 1874, since when no sections of consequence have been added to the Statutes.

Senate Bill 247 defines more clearly the cases of death that belong to the jurisdiction of the Coroner; saves money for Counties by requiring coroner's juries only in cases of suicide, homicide or accidental death; improves the quality of postmortem examinations throughout downstate Illinois by using doctors trained for this work.

Senate Bill 248 enables the Illinois Department of Public Health to assist Coroners in the

conduct of their investigations and provides an Advisory Board appointed by the Governor to advise upon and improve the quality of these services. The Advisory Board can suggest to the Department of Public Health procedures for the correction or adjustment of difficulties that opponents of these Bills have mentioned. Counties with adequate facilities are not affected by these Bills, except that opportunity for improvements are offered.

The members of the Illinois State Medical Society believes that Senate Bills 247 and 248 contain some of the most significant legislation in medicine and community health that has happened in Illinois. They urge your careful consideration and endorsement of these Bills.

Sincerely yours,

/s/

Edwin F. Hirsch, M. D.
Chairman of the Committee on Revision of the Coroner's Act, Illinois State Medical Society

August 8, 1955

Dr. Edwin F. Hirsch
Illinois State Medical Society
1439 South Michigan Avenue
Chicago, Illinois

Dear Doctor Hirsch:

Thank you for your letter relative to Senate Bills 247 and 248. As you undoubtedly know, I approved No. 248 on July 7, 1955. However, I found it necessary to veto No. 247. The enclosed copy of my veto message explains my reasons for doing so.

With appreciation for your interest and kind regards.

Sincerely yours,

/s/

William G. Stratton
Governor

WGS:ms
Enclosure

August 12, 1955

The Honorable William G. Stratton,
Governor of Illinois,
State Capitol Building,
Springfield, Illinois.

Dear Governor Stratton:

Thanks kindly for your letter of the 8th inst. relative to Senate Bills 247 and 248. The Illinois State Medical Society is pleased indeed that you approved Bill 248 on July 7, 1955. At the meeting of the Council of the Illinois State Medical Society on Sunday, August 7 at the Sherman Hotel in Chicago all of the members voiced a feeling of regret that you deemed advisable a veto of Bill No. 247. A similar feeling had been expressed on an earlier date at a meeting of the Board of Governors of the Institute of Medicine of Chicago. These expressions of feelings occurred because so much potential good of Senate Bill 247 had been lost on the basis of certain possible hazards which the drafting groups had considered but which no one believed would constitute a serious obstacle.

Your veto message stated in part:

"This Bill involves a fundamental change in the powers of the Coroners. The result will be to place upon the county payroll by appointment through one of the State Departments a number of pathologists who would not ordinarily be employed by the coroners. The result would be effectively to destroy county control over the cost and expense of the Coroner's office. Because of the fundamental departure from the existing law, this subject demands further consideration by the General Assembly."

It is fair to say that all of the provisions contained in both Bills 247 and 248 came as the result of discussions and pooled experiences of representatives of the Illinois State Medical Society, of the Illinois Coroners Association and of the Illinois Department of Public Health. All groups realized the presence of great defects in the present Coroner's Act which dates back to 1874, and especially in the quality of the medical examinations of coroner cases which everyone, lay and professional, agrees is in the field of medicine.

In order to help the Coroners of the many counties of Illinois in this respect, and to enable all downstate counties to have at least some of this professional benefit, only the minimum requirement for professional skill in necropsy examinations was specified with the hope that a modest beginning would initiate a growing service which in time the State of Illinois could look upon with respect and pride.

The specifications for the Coroner's physician performing these functions as set forth in Sec.

10.1 on page 4 of Senate Bill 247 read as follows: "Any medical examination or autopsy conducted pursuant to this Act shall be performed by a physician duly licensed to practice medicine in all of its branches and *wherever possible* by one having special training in pathology. In Class I counties (Cook) such medical examinations or autopsies shall be performed by physicians appointed or designated by the coroner and in Class II counties (downstate) by physicians appointed or designated by the director of the Department of Public Health," and in amendment 4, "In making such appointments or designations the director of the Department of Public Health *shall consult with the elected coroner in each county.*"

None of these provisions orders the use of pathologists as specialists for the necropsy examinations. They only say that wherever possible, physicians with special training in pathology be used, and state clearly that these appointments or designations of physicians to make the necropsy examination be through the Director of Public Health in *consultation with* the elected coroner in each county. The purpose of this plan was to use well qualified physicians for groups of counties where individual coroners might have difficulty in obtaining this service.

When the Coroner's Act was placed on the statutes in 1874 modern scientific aids in the detection of the cause of unnatural deaths had not been developed. The Institute of Medicine of Chicago for more than 25 years has urged legislative improvement of the old Coroner's Act of 1874, and in this effort more recently was joined by the Chicago Medical Society, the Illinois State Medical Society, the Illinois Coroners Association, Welfare Council of Metropolitan Chicago, and other civic organizations.

Inasmuch as you have signed Senate Bill 248 which provides for the appointment of an Advisory Board on Necropsy Service to Coroners in the Department of Public Health, the Illinois State Medical Society and other interested groups earnestly hope that you will appoint soon the members of this Board. This Advisory Board can then investigate thoroughly and make suitable proposals to clarify phases of this service that now seem in doubt. You will receive presently suggestions as to qualified physicians for appointment to this Board from the Chairman of the Council of the Illinois State Medical Society through the Director of the Department of Public Health. The Illinois Coroners Association also is expected to submit suggestions for your consideration.

An Advisory Board composed of physicians, coroners and lay members, working together, can help realize great improvements in the administration of criminal and social justice in the State of Illinois.

May I thank you again for your kind letter.

Sincerely yours,

/s/

Edwin F. Hirsch, M. D.
Illinois State Medical Society

The comments and the three letters are a statement to the members of the Illinois State Medical Society from the Committee on Revision of the Coroner's Act. The Committee hopes that Governor Stratton will appoint promptly the Advisory Board authorized under the provisions of Senate Bill 248, and that this Board will investigate and clarify questions that can make possible proposals of legislation even better than those contained in Senate Bill 247.

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Compensating the faculties of medicine

Many medical school professors hold a unique position in our educational system. They are paid for teaching and research but, unlike their academic colleagues in the Latin and Greek departments, usually work for their salaries by rendering medical service to patients in the school hospital or clinic. The institution collects the money and now and then there is enough left over to subsidize the classical language department.

It is an unusual situation. Men who teach agriculture are not required to operate a farm to make a living and the same can be said of instructors in banking and insurance. There is no objective to this system if the physician realizes he is being exploited. Nor does organized medicine object provided every cent goes back to the practicing physician after deductions have been made for expenses.

One of the basic reasons for these differences is the wide variance in compensation in the teaching and the practice of medicine. There are as many plans for compensating the faculty of

clinical departments as there are medical schools. The majority are geared to suit the individual school and community.

There is some friction between the medical faculty and the local medical society. This is explained by the fact that to attract physicians, the medical school is forced to make unusual concessions which become targets for criticism. For example, the medical society objects when an instructor is permitted to care for private patients in the university or state hospital. In these instances, the system rather than the physician ought to be blamed.

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Richard J. Graff, M.D. received citizens' award

Dr. Richard J. Graff, superintendent of Manteno State Hospital, received an award commemorating his 25 years of service in the care of the mentally ill. This award was given on October 22 at the Manteno Hospital, Illinois, largest mental hospital. Although the oldest mental hospital superintendent in terms of state service, Dr. Graff is only 53 years of age. The presentation was in the form of a silver plaque. Dr. Graff, long a member of the Illinois State Medical Society, began his work in mental institutions at the Dixon State Hospital.

In 1941 he became superintendent of Lincoln State School. He left Lincoln in 1942 to enter the Medical Corps of the United States Air Force, serving two years in this country then two years in the European theater of operation. He was discharged in 1946 with the rank of colonel, then became superintendent of Peoria State Hospital. In 1949 be became the first superintendent of the Galesburg State Research Hospital where he remained until June, 1954, when he was transferred to Manteno State Hospital as its superintendent.

While in Galesburg, he became secretary of the Knox County Medical Society and was quite active in the affairs of that society. Dr. Graff has made many contributions to psychiatry, and in addition to a fellowship in the American Psychiatric Association, he is a member of several other special societies.

Those of us who have known Dr. Graff during these many years of faithful service in mental hospitals in Illinois, offer our congratulations and best wishes for his meritorious service.

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Medicine on postage stamps

Among recent issues of postage stamps were the following which are of interest to physician philatelists:

Netherlands—five special stamps, each with a surcharge to help in the fight against cancer. The design shows a microscope and crab.

Australia—A 3½d stamp in honor of the nursing profession. Florence Nightingale is a background figure.

Italy—International Medical Day was observed with a 25-lire stamp portraying Girolamo Fracastoro (1483-1553), physician, mathematician and philosopher. He was the personal physician to Pope Paul III.

Yugoslavia—Has released a nine-value series showing the medicinal plants and flowers of that country; printed in natural color.

Israel—Commemorated the 25th anniversary of Magen David Adom, the Israeli equivalent of the Red Cross, with the issuance of a 160-pruta stamp.

Finland—A series of three stamps with a surcharge for the benefit of the Red Cross.

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Doctor-hospital relationships

To acquaint doctors with the official A.M.A. policy on the relationship of physicians and hospitals, a pamphlet has just been issued by the A.M.A.'s Council on Medical Service. This is something which should be read by all physicians who have hospital connections.

The pamphlet of 16 pages is made up of two reports adopted by the A.M.A. House of Delegates. One is "Guides for Conduct of Physicians in Relationship With Institutions," adopted in December 1951. The other, a supplement, is "Report of the Joint Committee on Hospital-Physician Relationships of the Board of Trustees of the American Medical Association and the American Hospital Association," adopted in June 1953.

Copies may be secured from the council.

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John R. Wolff, Chairman, Walter C. Bornemeier, Edward W. Cannady, Roland R. Cross, Jr., E. F. Dietrich, W. W. Fullerton, Edwin F. Hirsch, Frederic T. Jung, W. R. Malony, Caesar Portes, William Requarth, Frederick W. Slobe.

Some Economic Aspects of Health Resorts

FREDERIC T. JUNG, M.D., CHICAGO

IT has been difficult to define the relations of health resorts to the practice of medicine in the United States. In theory it ought to be possible for a physician to recognize the cases in which sojourn at a health resort would help the patient; it ought to be easy for the family physician to establish satisfactory relationships with physicians who are in charge at health resorts and to resume the care of the patient after he has returned home.

In practice, however, an initial difficulty has been to discover any scientific sense in the literature that has been written in praise of mineral waters. One writer lauds his water as being "rich in sodium chloride," as if table salt were a rare substance. Another writer tells unctuously of the radon content of his water and remarks how fast radon is exhaled again after inhalation treatments or after drinking radon-containing water; he is obviously ignorant of the fact that a given radon atom has no effect unless and until it discharges its alpha particle and so becomes an atom of the vicious substance polonium 218 (formerly called radium A). A third, in the year 1955, still sees curious virtues in the mud-bath, an expensive and inconvenient ritual that probably has nothing but psychological advantages over other forms of heat hydrotherapy.

The overwhelming mass of this literature has been a recounting of superstitions ascribed to the Aztecs, the ancient Romans, the American Indians, and other sources, with a meticulous reprinting of inconsequential chemical analyses and a cheerful by-passing of much recent information from the fields of pharmacology and bioclimatics. While the balneologist tries to make up his mind whether his mineral water is best for ailments of the kidneys, or of the liver, or of the spleen, the critical reader wearies of searching for anything conclusive in this haystack of words. At the same time the vendor of the mineral water may be preparing it for the market by distilling and carbonating it! This takes a load off the minds of potential buyers, who may have been confused by thoughts about the dangers of radium, the troublesome features of hydrogen sulfide, and the unfortunate effects of sodium chloride in cardiac edema. But it distresses those balneologists and hydrotherapists who are trying earnestly to shake themselves free of their heritage of confused thinking. Their work is important and often effective, but its rational basis needs to be made more secure by further critical investigations, especially by physiologists and psychologists.

A second difficulty has been that of assuring adequate medical direction at health resorts. A survey in 1938 revealed that only 10 such institutions in the United States had adequate medical direction. Efforts to improve this situation

have been made, but their effectiveness has been doubted. A hopeful sign has been the rapidly developing interest in rehabilitation programs. The immense potential usefulness of health resorts in rehabilitation was sketched by Krusen[1] in 1944. Since rehabilitation of the sick and injured is the aim of every physician no matter what his specialty, these possibilities should excite widespread interest. The integration of an existing health resort into a rehabilitation plan would create a much more favorable atmosphere for medical supervision and would help to discourage cultism and quackery. It is logical to hope that these possibilities will be thoroughly explored.

A third difficulty affects the health resorts of other countries in varying degrees, but is especially perceptible in the United States. Whether or not the need for uninhibited physical activity is innate in Americans, and whether or not the unwillingness to be fenced in is a national characteristic, the fact is that two or more weeks of passivity in a health resort, with improvement slow and expenses high, is unsuited to their temperament. A German exchange student who recently crossed the Atlantic on a liner boasting a Finnish sauna remarked about some American students, "They exercise even in the steam room!" Partly as a result of this restlessness, the use of American health resorts has been notably sensitive to seasonal and economic[2] swings. This has been aggravated in recent years by the fact that vitamins, hormones, sulfas, and antibiotics, especially when injected, sometimes give much quicker results.

In view of these facts, extraordinary interest attached to an article "La crise du thermalisme francais" that appeared in the monthly "Ecrits de Paris" in May 1954 and was discussed at length in the German monthly "Heilbad und Kurort" in February 1955. In the original article, Sarraz-Bournet sketches the history of French balneology since Gallo-Roman times and then gives statistics regarding the present status of French health resorts.

He states that France at the time of writing was using about 1,200 different natural "healing" springs, which supplied the therapeutic needs of 120 institutions in 75 recognized places. The statistics show that in 1951 these facilities were used by 290,000 people (including 51,000 foreigners). In 1953 they were used by only 251,000 people (including only 31,000 foreigners). Other figures likewise indicated that patronage by foreign guests for varied reasons was falling off badly. The following is translated from the German summary of Sarraz-Bournet's article:

"The French social insurance arrangements allow or 80 per cent of the charges for treatment and of physicians' fees; they also pay part of the expenses for travel and lodging. In spite of the advantages so granted, a large number of people with this form of social insurance had to get along without their course of bath-treatments because they did not have the additional money needed to finance their stay at the health resort. Of the potential guests who are cared for by social security arrangements, many go to baths in Germany and Italy. In Baden-Baden alone, in 1953, according to Sarraz-Bournet, 6,200 French patients took the treatment. Even if one allows for the fact that this number must have included men from the French army of occupation, it must be considered astonishing. The explanation is assumed to lie in the better organization of the health resorts, the new technical installations, the food at the hotels, and the low prices charged for lodging.

"Sarraz-Bournet comes to the conclusion that apparently the French system of health resorts is in a state of crisis. It is his opinion that the French baths have not met the requirements for improving their services. (He says that) of the funds from the Marshall Plan, 500 million have been made available to the health resorts, but as a loan that was to be repaid. But what is needed unconditionally (he said) is subsidies. Since official arrangements for bank loans toward necessary construction have been lacking, the system has felt for a long time the need of loan funds earmarked for baths similar to those that have been granted, for instance, to owners of hotels. The hope for such loans to baths, however, could not be fulfilled because of objections from the Ministry of Finance."

Among the things that invite thought in this passage is the evidence that for some individuals any given amount of money from social security

1. Krusen, Frank: The Place of Health Resorts in Rehabilitation Following Injuries, J.A.M.A. 125:905-911 (July 29.) 1944.
2. Simons, A.M.: Economic Aspects of Health Resort Therapy, J.A.M.A. 124:33-35 (Jan. 1) 1944.

sources is not quite enough. It also illustrates the immense difficulty of administering loan funds and of placing credits from such enterprises as the Marshall Plan where they will do more good than harm. But especially it indicates the importance that is attached in Europe to something that is still imperfectly worked out in the United States, namely the proper use of health resorts.

The detrimental physical effects of excessive bed rest have been much studied in recent years; they were brought out especially in a series of articles by Harrison, Eastman, Powers, Dock, and Ghormley.[3] But the confused thinking that sometimes underlies the so-called "trip treatment", the fact that enforced idleness is sometimes exactly the wrong thing for the psychiatric patient, and the detrimental psychological effects of excessive or uncalled-for mental rest was brought out by Menninger[4] in the concluding article of the series.

Perhaps American health resorts should develop in the direction so clearly manifested in American summer camps. Thought of by many uninformed people as places for idleness, the best summer camps are really extremely busy places. The successful director aided by an industrious staff is not only able to keep the campers constructively occupied from sunup to nightfall, but also knows how to weave them into responsibilities that bring important social and occupational experience. The beneficial effects on some personalities are strikingly beneficial. The camp becomes an integrated, balanced community instead of something one-sided and parasitic. At the same time it becomes less expensive.

The idea of summer camps for older people is now being developed, and the next logical step would be year-round communities, nearly self-supporting, where people could gain the benefits of a change of social and geographic environment without forfeiting the benefits of interesting, productive work.

When locations can be found where nature supplies preheated water for washing, swimming, and hydrotherapy, so much the better. The saving is obvious, so that finespun arguments about such things as aperients, peloids, and trace elements are gratuitous. The United States has attractive regions answering that description. The late Dr. Richard Kovacs used to exhibit a magnificent collection of colored transparencies in proof of this. The problem of making economical use of these natural resources deserves continued attention.

3. J.A.M.A. 125:1075-1087 (Aug. 19) 1944.
4. Menninger, Karl: The Abuse of Rest in Psychiatry. J.A.M.A. 125:1087-1090 (Aug. 19) 1944.

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Acute cholecystitis

Acute cholecystitis usually results from obstruction of the cystic duct by calculi. Unless surgical treatment is carried out early, the condition may progress rapidly to the point of complications such as gangrene, perforation, abscess formation, hydrops, or dense adhesions, rendering proper surgical therapy difficult. A series of 50 cases of acute cholecystitis (diagnosed pathologically) is reviewed, with reference to the clinical findings, the diagnosis and the preoperative and operative management. In all cases, operation was performed as soon as the diagnosis was established and the patient properly prepared for surgery. The mortality rate of the series was zero and no postoperative complications could be directly attributed to the surgical procedure. *Meredith J. Evans, M.D. Management of Acute Cholecystitis. West Virginia M. J. August 1955.*

THE P. R. PAGE

1956 a momentous PR year

Nineteen Fifty Six will be a momentus year in medical public relations.

The outlook is beclouded. Dangerous legislative proposals are on the federal agenda. Only hard work on the part of doctors will prevent the taking of another — and big — step toward the socialization of medicine.

There is a complacency about the whole thing which is disturbing. Many physicians are aware of the dangers, and have been trying to arouse their colleagues. Unfortunately, too many are content to sit on the sidelines and watch others carry the ball. Never has there been more need for concerted teamwork than right now.

When Congress resumes its deliberations in January, it will have before it many matters pertaining to medical practice. Perhaps the most important will be H. R. 7225. That measure had easy sailing in the House of Representatives before adjournment last June. It will have easy sailing in the Senate unless something is done to block it.

H. R. 7225 provides for numerous changes in the Social Security Act. The greatest threat to medicine is that section which would make permanently and totally disabled persons 50 years or older eligible to receive cash benefits now restricted to those 65 years or over.

On first thought, this would seem to be a desirable way of taking care of the disabled — and the public is being "sold" on that basis. Actually, this paves the way for putting the federal government into medical practice because it would require machinery to determine disability.

The ethical physician would be honest in this determination. However, the unethical doctor — and there are some, over whom medical societies have no control — would not hesitate to declare a patient disabled, especially if he were under political pressure to do so.

Aside from the inherent dangers of the present proposal, its adoption would merely be a step toward further broadening of the Social Security benefits base. Eventually, cash benefits and medical care could be provided for any one disabled, permanently or temporarily. Where there would be a halt, nobody knows.

There are many more bad features of H. R. 7225. Consequently, it is to be hoped that the measure not only will be given a thorough hearing before the Senate finance committee but that an exhaustive study of its potentialities will be made *before* it becomes law.

The medical profession has two courses open to it to prevent the passage of a measure which is a definite threat to the health and welfare of this nation.

One is for doctors to assume their individual responsibilities and to impress their Senators with the dangers which exist. This is a duty incumbent upon every loyal citizen who has consideration for the stability of his country.

Next, is informing the public of these dangers, so that there will be enough demands upon members of the Senate that they will have to give

the resolution careful thought and not be stampeded into approval such as occurred in the House of Representatives.

This is a public relations job which lies just ahead. The medical profession cannot afford to fall down. There is too much at stake.

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U. S. health spending

Federal spending for health and welfare shows which way the wind is blowing. And the wind is taking on hurricane proportions.

In the 1956 fiscal year, the total health budget, according to a compilation made by the Washington office of the AMA, is approximately $2,269 millions, an increase of $137 millions over this year. However, a decrease of $36 millions in the health spending of the Department of Defense serves to minimize the danger partially.

Two agencies — Veterans Administration and Department of Health, Education and Welfare — will be spending $1,317 millions, an increase of $163 millions. It is in those agencies that one finds the greatest trend toward socialized medicine. The VA's health budget is being upped 5 per cent; HEW's, 7 per cent.

Both agencies are carrying their propaganda to the public through large publicity departments financed by taxes. The only way the medical profession can prevent being wrecked by the oncoming storm is to build a strong defensive wall in the form of public opinion.

That is another PR job ahead for 1956.

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New television aids

To aid in the PR programs of medical societies, the AMA Bureau of Health Education and the National Society for the Prevention of Blindness have prepared two new television "scripts-with-film" presentations dealing with the eye. These shows are designed so that a local physician can narrate while the film is thrown on the television screen.

One, "A Clear Picture," deals with the eye and its functions. It includes an animated sequence using a fresh orange, a glass lens, and a piece of lipstick to show the structure of the eye. "Wonderful Spectacle" describes the functions of glasses and lenses. Dr. Brittain F. Payne, New York ophthalmologist, is the film demonstrator.

Each program is 15 minutes in length, but it may be combined into a 30-minute presentation. The films and scripts may be had through the AMA TV film library. There is no cost to medical societies.

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A PR gesture

Wally Carlson, Chicago Tribune Syndicate artist, in one of his "Mostly Marlarky" cartoons recently, showed the wife with a letter in her hand and saying to her husband: "Isn't that thoughtful. Dr. Mart put a get-well card in with his bill." Here is a PR gesture worth considering in selected cases.

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Influences at work

At the present time, powerful forces are at work that may affect the environment of medicine for good or evil. These are, to a large extent, the result of the industrial age in which we live. The drive in the direction of socialization of medicine, the rapid expansion of federal medicine, the emphasis on group and co-operative medicine, on comprehensive care under industrial and labor aegis are with us. I mention these not to condemn or defend them at this time, but merely to point out that these influences are at work and we must strive to understand them and consider their effect, not only on the quantity but on the quality of medicine that may in the future be available to our people. *Walter B. Martin, M.D. Medicine in an Industrial Civilization. Texas J. Med. July 1955.*

CORRESPONDENCE

Clinics for Crippled Children Listed for January

Twenty-five clinics for Illinois' physically handicapped children have been scheduled for January by the University of Illinois Division of Services for Crippled Children. The Division will count 20 general clinics providing diagnostic orthopedic, pediatric, speech, and hearing examination along with medical social and nursing service. There will be three special clinics for children with cardiac conditions, one for children with rheumatic fever and one for cerebral palsied children.

Clinics are held by the Division in cooperation with local medical and health organizations, both public and private. Clinicians are selected among private physicians who are certified Board members. Any private physician may refer to or bring to a convenient clinic any child or children for whom he may want examination or consultative services.

The January clinics are:

January 4 - Hinsdale, Hinsdale Sanitarium
January 5 - Sterling, Field House
January 5 - Clinton, Christian Church
January 10 - Peoria, Children's Hospital
January 10 - E. St. Louis, St. Mary's Hospital
January 10 - Quincy, St. Mary's Hospital
January 11 - Joliet, Will County T. B. Sanitarium
January 12 - Elmhurst Cardiac, Memorial Hospital of Dupage County
January 12 - Litchfield, Madison Park School
January 12 - Mt. Vernon, Masonic Temple
January 12 - Springfield, St. John's Hospital
January 13 - Chicago Heights Cardiac, St. James Hospital
January 17 - Alton, Alton Memorial Hospital
January 17 - Danville, Lake View Hospital
January 17 - Effingham (Rheumatic Fever), St. Anthony's Hospital
January 18 - Aurora, Copley Memorial Hospital
January 18 - Evergreen Park, Little Company of Mary Hospital
January 18 - Springfield (Cerebral Palsy), Memorial Hospital
January 19 - Bloomington, St. Joseph's Hospital
January 19 - Cairo, Public Health Building
January 19 - Rockford, St. Anthony's Hospital
January 20 - Evanston, St. Francis Hospital
January 24 - Peoria, Children's Hospital
January 25 - Salem, Masonic Temple
January 27 - Chicago Heights Cardiac, St. James Hospital

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Midwinter Seminar in Ophthalmology and Otolaryngology

The 10th Annual University of Florida Midwinter Seminar in Ophthalmology and Otolaryngology will be held at the Sans Souci Hotel in Miami Beach the week of January 16th., 1956. The lectures on Ophthalmology will be presented January 16, 17, and 18 and those on Otolaryngology on January 19, 20, and 21. A midweek feature will be the Midwinter Convention of the Florida Society of Ophthalmology and Otolaryngology on Wednesday afternoon, January 18, to which all regis-

trants are invited. The registrants and their wives also may attend the informal banquet at 8 p.m. on Wednesday. The schedule has been changed to provide a maximum time for recreation each afternoon.

The Seminar lecturers on Ophthalmology this year are: Dr. Francis H. Adler, Philadelphia; Dr. A. Gerard DeVoe, New York; Dr. Michael J. Hogan, San Francisco; Dr. C. Wilbur Rucker, Rochester, Minnesota; and Dr. A. D. Ruedmann, Detroit, Michigan. Those lecturing on Otolaryngology are: Dr. Frederick A. Figi, Rochester, Minnesota; Dr. Lewis F. Morrison, San Francisco; Dr. Charles E. Kinney, Cleveland; Dr. John R. Lindsay, Chicago; and Dr. Bernard J. McMahon, St. Louis.

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American Board of Obstetrics and Gynecology

The next scheduled examination (Part I), written examination and review of case histories, for all candidates will be held in various cities of the United States, Canada, and military centers outside the continental United States, on Friday, February 3, 1956.

Case abstracts numbering 20 are to be sent by the candidates to the Secretary as soon as possible after receiving notification of eligibility to the Part I written examination.

Office of the Secretary—Robert L. Faulkner, M.D.
2105 Adelbert Road
Cleveland 6, Ohio

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American Academy for Cerebral Palsy Officers

At the meeting of the American Academy for Cerebral Palsy, Memphis, Tennessee, October 10, 11, and 12, the following officers were elected for the forthcoming year:

Dr. Margaret Jones, President
University of California Medical Center
Los Angeles, California

Dr. Nicholson J. Eastman, President-Elect
Johns Hopkins Hospital
Baltimore, Maryland

Dr. Robert A. Knight, Secretary-Treasurer
869 Madison Avenue
Memphis 3, Tennessee

The 1956 meeting will be held in Chicago; the 1957 meeting will be held in New Orleans.

Notice of V Congress of Pan American Medical Women's Alliance

The *V* Congress of the Pan-American Medical Women's Alliance will be held in Santiago and *Vina del Mar,* Chili, March 6 to 13th, 1956. A pre- and post-congress trip is planned to include visits to hospitals and medical clinics in Mexico, San Salvador, Panama, and Peru.

A week's precongress trip is planned in the lake region of southern Chile under the guidance of some of the Chilean women doctors. Following the Congress a week will be spent in La Paz, Bolivia, visiting their medical projects among the Incas. En route to Lima there will be a day trip across Lake Titacaca and ample opportunity to explore the archeological treasures of Cuzco and Macchu Picchu. Arrangements may be made to shorten or lengthen the planned itinerary. Papers will be read on:
Medical Problems of Women in Medicine, Infertility, Family Security, Cancer, Miscellaneous Subjects.

Information may be obtained from the Secretary, Dr. Eva F. Dodge, 2124 West 11 Street, Little Rock, Arkansas, or from the Program Chairman, Dr. Eva Cutright, Wooster, Ohio.

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Northwestern University Medical School Course in Radiation Physics

The annual course in Radiation Physics for residents in radiology at the hospitals associated with Northwestern University Medical School will again be open to all interested physicians.

It will be given on Monday and Thursday evenings 7:00 to 9:00 p.m. in the third floor conference room at St. Luke's Hospital.

Tuition fees: Residents: $10.00; practicing and other physicians: $25:00. To make application write to: Director Graduate Division Northwestern University Medical School, 303 E. Chicago Avenue, Chicago, Illinois.

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Intestinal Research Institute

The Intestinal Research Institute has been incorporated in New York State as a nonprofit educational, research foundation for the study of intestinal diseases. The incorporators are Dr. Earl J. Halligan, International Secretary General of the International Academy of Proctology and Director of Surgery, Jersey City Medical Center; Dr. Alfred J. Cantor, Editor of

the American Journal of Proctology; Dr. Louis Wegryn, President of the International Academy of Proctology; and Dr. Paul Lahvis, Chairman of Foreign Chapters Committee of the Academy.

An initial project on the possible virus etiology of ulcerative colitis is planned. Eminent virologists in the United States have been contacted, and a grant for this study will be established.

A research laboratory to study the etiology and pathogenesis of ulcerative colitis has also been established at 147-41 Sanford Avenue, Flushing, New York, headquarters of the International Academy of Proctology.

Intestinal Research Institute funds will come primarily from contributions and grants. An initial grant of $3,000.00 has been provided by the International Academy of Proctology. All physicians are offering an opportunity to affiliate with the Intestinal Research Institute as Contributing Founders.

For full details write to the Intestinal Research Institute, Office of the Director, 147-41 Sanford Avenue, Flushing, New York.

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Officers of Chicago Council of Child Psychiatry

At the fall meeting of the Chicago Council of Child Psychiatry the following assumed their elective offices

President — Irene Josselyn M. D.
President Elect — Adrian Vander Veer M. D.
Secretary-Treasurer — H. M. Segenreich M. D.
Executive Councillors — Anne Benjamin M. D.
Elsie Haug M. D.
George Perkins M. D.
Program Chairman — Harold Balikov M. D.

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Central Society of Nuclear Medicine

The Central Society of Nuclear Medicine was recently organized as a regional society to encourage and promote interest, work and investigation in the field of nuclear medicine.

The Society is open to physicians and other professional workers in the field.

It is planned to have three meetings per year.

The following officers were elected at the first meeting:

Irvin F. Hummon, M.D.	President
Donalee Tabern, Ph.D.	Vice President
Ervin Kaplan, M.D.	Treasurer
Robert S. Landauer, Ph.D.	Secretary

All those interested are invited to contact the secretary:

Robert S. Landauer, Ph.D.
Radiation Center Building
1903 W. Harrison Street
Chicago 12, Illinois

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The price of success

Sometimes a man, by hard work and ability, gets to the top and is looked upon by the world as a great success, but occasionally this success has been bought at too high a price—en route he has lost his family. The situation is particularly difficult if boys are involved. Like as not, the father has had little time for them; perhaps because they do not possess his drive he has written them off—this is tragic. Boys need a father or a father surrogate in order to develop masculine identification, and I have seen more successful executives than I care to recount who had to take this problem into account too late to do anything about it. Obviously, success is not worth this loss—it turns bitter in one's mouth. It is a potent source of pressure upon the busy executive to have lost his family while he fought his way up. *Francis J. Braceland, M.D. Emotional Problems among Executives. Med. Ann. District of Columbia, May 1955.*

NEWS of the STATE

ADAMS

Pilot Heart Study of Children.—The Heart Committee of the Adams County Medical Society, in co-operation with the Adams County Chapter of the Illinois Heart Association, was to have launched a pilot study of all school children in several grades in one of Quincy's public schools in November. The purpose is to detect early, acute rheumatic fever, one of the principal causes of crippling heart disease in children. It has already been shown elsewhere that this frequent cause of heart disease can be virtually wiped out by such studies, when combined with proper treatment. Full details of this important study in Quincy of the main cause of heart disease in school children will be announced shortly.

Society Activities.—Mr. Paul R. Weaver, Charter Life Underwriter of Monmouth, addressed the Adams County Medical Society at the Lincoln-Douglas Hotel, Quincy, October 11, on "Estate Planning", emphasizing the various taxation phases of the problem.

Personal.—Newly elected members of the Adams County Medical Society are Drs. William U. McReynolds and Donald M. Wright, both of Quincy.

COOK

Pediatric Meeting.—A joint meeting of the Chicago Pediatric Society and the Chicago Laryngological and Otological Society was held, November 4, at the Furniture Club of America. The speakers were Doctors Philip Rosenblum and John R. Lindsay on "The Present Status of Otitis Media." Drs. Thomas C. Galloway and Erich Uhlmann spoke on "The Tonsil Problem: Surgery or Irradiation?" and a group from the Michael Reese Hospital, including Robert Henner, F. J. Pollock, P. A. Campanelli, M.A., M. W. Judiesch, M.A., and Doris P. Wheeler, presented "The Team Approach to Speech and Hearing Disorders." Discussions were led by Doctors Francis L. Lederer, George Livingston, and Helmer Myklebust, Ph.D.

Belfield Lecture.—Dr. Russell D. Herrold presented the Twenty-seventh Annual William T. Belfield Memorial Lecture of the Chicago Urological Society, October 27. His subject was "The Story of Antimicrobial Agents for Urinary Infections and Some New Concepts." This year the wives of the members were invited for cocktails and dinner, an innovation for the Belfield meeting. During the lecture the wives were entertained with a talk on "Present Trends in Interior Decorating" by Mr. Robert Pemberton, director of Interior Design, Chicago Academy of Fine Arts.

Monetary Gift Honors William Danforth.—Evanston Hospital has received a gift of $100,000 from Mr. and Mrs. John J. Louis, Sr., Evanston, in honor of the memory of Dr. William Danforth who died in 1949. In making the gift available, the donors said that it was because of their admiration of the late Dr. Danforth who delivered their sons John Jr., Michael, and Herbert. The last named, also a physician, is now serving a residency at Hines Hospital. Dr. Danforth had been professor emeritus of gynecology and obstetrics at Northwestern University Medical School. He bequeathed the hospital $50,000. The funds will be used to help pay for a new building and expansion costs at the hospital as well as a new obstetrical department.

Faculty Changes.—Recent appointments to the faculty of the Chicago Medical School include the following: in the department of medicine, Dr. Lee H. Schlesinger, clinical associate professor; Dr. James B. Aerardi, clinical instructor; Dr. Edwin Feldman and Dr. Jerome J. Podgers, clinical assistants; and Dr. Arnaldo Libretti, research fellow in allergy. In the department of pathology: Dr. Paul B. Szanto, associate professor, and Dr. Johnathan B. Horrell, clinical instructor; in the department of psychiatry: Dr. Joseph W. Friedlander, associate professor; and in the department of surgery. Dr. Harry H. Le Veen, associate professor; Dr. Bertram Levin, clinical associate

Presidents of national, state and county auxiliaries attending the Fall Conference of the Woman's Auxiliary to the Illinois State Medical Society, October 6, 1955, at the Sheraton-Blackstone Hotel, Chicago. (1) Mrs. Albert J. Nehf, Kankakee County; (2) Mrs. Mason G. Lawson, Woman's Auxiliary to the American Medical Association; (3) Mrs. Warren W. Young, Woman's Auxiliary to the Illinois State Medical Society; (4) Mrs. J. C. Garland, Kane County; (5) Mrs. John T. France, McLean County; (6) Mrs. Wylie H. Mullen, Will-Grundy County; (7) Mrs. W. W. Davidson, President-Elect Marion-Clinton County; (8) Mrs. Leonard J. Houda, Cook County; (9) Mrs. Gilbert H. Edwards, Perry County; (10) Mrs. Armand J. Mauzey, DuPage County; (11) Mrs. Harry A. Mittleman, Madison County; (12) Mrs. Robert Borrowman, DeKalb County; (13) Mrs. Robert Hart, Peoria County; (14) Mrs. B. Smith Hopkins, Jr., Champaign County; (15) Mrs. Richard E. Icenogle, Warren County; (16) Mrs. J. R. Burnett, Effingham County.

professor of radiology; Dr. Helen L. Button, clinical instructor; and Dr. Paul R. Rosenbluth, clinical instructor in neurosurgery.

Promotions at the school included: Dr. David Presman, clinical associate professor of urology; Dr. Samuel R. Rubert, clinical assistant professor of orthopedic surgery; Dr. Howard H. Bass, clinical associate in urology; Dr. Robert D. Crane, clinical associate in surgery; Dr. Louis Richmond, associate in medicine; and Dr. Lester Wishingrad, instructor in pediatrics.

Illinois Physicians Made Fellows in Gastroenterology.—Ten Chicago physicians were inducted as fellows in the American College of Gastroenterology at the annual convocation in the Shoreland Hotel, Chicago, October 23. They are:

Drs. Arkell M. Vaughn, past president of the Illinois State Medical Society; Walter C. Bornemeier, past president of the Chicago Medical Society; Arthur J. Atkinson, Herman F. DeFeo, Vincent J. Galante, William B. Knapp, Mitchell A. Spellberg, Harry A. Oberhelman, George J. Rukstinat, and John P. Waitkus.

Inducted as associate fellows were: Drs. Jerome Forman, Samuel L. Governale, Benjamin F. Gordon, and Leonard F. Kowalski. Dr. John B. Karr was made a member. All are from Chicago.

Dr. Burt J. Canfield of Rockford was made an associate fellow.

At the annual meeting, Dr. Edward J. Krol, Chicago, was elected a trustee.

Wilder Penfield Gives Fraternity Lectures.—Dr. Wilder Penfield, Director of the Montreal Neurological Institute, gave the Phi Epsilon Fraternity Lectures recently. The first, on "Permanent Record of the Stream of Consciousness," was given at Mount Sinai Hospital, October 31, in honor of Dr. Harry C. Rolnick. The second, on "Voluntary Movement—Some Observations on the Role of Centrencephalic Control", was presented in Thorne Hall, Northwestern University, November 1, in honor of Dr. Carl A. Dragstedt. The third lecture, on "Results of Treatment of Focal Epilepsy by Cortical Excision", was given at the University of Illinois College of Medicine, November 2, in honor of Dr. Francis E. Senear.

The Artery Bank.—On October 11 a Central Artery Bank was opened, in the Hektoen Institute for Medical Research; it is supported by the Chicago Heart Association. Procurement of suitable arterial segments is based on the large postmortem material of the Cook County Hospital. Sterilization, lyophilization, and storage of blood vessels are accomplished at the bank. Segments can be obtained

by those whose training in vascular surgery is known or for whose ability the surgical staff at the requesting hospital can vouch. Surgeons interested in obtaining such segments may obtain further information by calling Miss Naomi McElwain at MOnroe 6-0787.

Physician Honored.—A testimonial dinner was held in honor of Dr. James Toman, a member of the staff of Chicago Medical School for his services to the community. The dinner was sponsored by the North Kenwood-Oakland Community Conference in the community center recently.

Harry Dale Retires.—On October 28 the retirement of Dr. Harry Dale was announced, bringing to a close fifty-three years of service as a physician and thirty-six years of practice of medicine in Chicago Heights. As a token of goodwill towards St. James Hospital, with which he has been associated since May 1919, Dr. Dale presented to it his valuable collection of medical and surgical instruments. The equipment includes delicate eye surgery apparatus as well as tonsil, mastoid, and nose and throat materials. Dr. Dale has held every medical staff position at St. James, including the presidency of the staff in 1940. Quoting Dr. Dale from an interview, the Chicago Heights Star reported him to say that "Medicine has come a long way in over a half a century. When I began practice with my father in McLeansboro down in Southern Illinois, it was a true horse and buggy profession. I can remember driving miles in my buggy over many roads to deliver babies, or do some kitchen table surgery because the nearest hospital was 60 miles away. Times have sure changed." In the future Dr. Dale and his wife will winter in Florida, returning to Chicago Heights in the summer.

Hospital Observes Fiftieth Anniversary.—Columbus Memorial Hospital observed its fiftieth anniversary, October 12, at a dinner in the Conrad Hilton hotel attended by more than 600 persons. Cardinal Stritch paid tribute to the hospital's founder, Mother Cabrini, later beatified as St. Frances Xavier Cabrini, who established the Missionary Sisters of the Sacred Heart, operators of the hospital.

Pietro Guadagnini, Italian consul general in Chicago, presented the Gold Star of Solidarity to three staff physicians: Dr. Karl Meyer, chief surgeon; Dr. August F. Daro, head of the women's department, and Dr. Peter Rosi.

Dr. Edward Foley, head of the hospital's department of medicine, asserted that a hospital requires a spirit of humility to function properly. A good hospital, he said, should be a place where a patient goes in dignity to be ill, rather than to become a statistic in a research problem.

Mayor Daley expressed gratitude to the Missionary Sisters of the Sacred Heart for their fifty years of service to the city. Dr. Meyer presented gold keys for twenty-five years' service to 11 physicians on the staff.

Personal.—Dr. Jules H. Wasserman, professor of neurology and psychiatry, and Richard A. Waterman, associate professor of anthropology, both of Northwestern University faculty, attended the sixth annual conference of the National Music Therapy Association in Detroit, October 6-8. Dr. Wasserman, a first vice-president of the association, moderated a panel on the sociological and psychological implications of music therapy, while Mrs. Waterman spoke on "Form and Meaning of Australian Aboriginal Music."—Dr. Aaron Arkin has been named president of the Chicago Diabetic Association. He is professor of medicine at the University of Illinois College of Medicine, professor of medicine and a trustee of Cook County Graduate school, and a trustee of Hektoen institute as well as attending physician and chairman of the department of medicine at Weiss Memorial hospital.—Dr. Fay H. Squire, director of the department of radiology at Presbyterian Hospital, has been elected Treasurer of the American College of Radiology, succeeding Dr. Earl E. Barth, also of Chicago.

Retirement Problems of Industry.—On November 30, a conference was held on "Retirement Problems of Industry." The meeting, which is said to be the first of its kind ever held in Chicago, will be held under the joint auspices of the Chicago Association of Commerce and Industry and the Chicago Heart Association. The speakers were representatives of industry and medicine. Participating doctors of medicine will be Irving S. Wright, Morris Fishbein, and George V. LeRoy.

New Head of Anatomy at Illinois.—Dr. Samuel R. M. Reynolds has been appointed professor and head of the department of anatomy at the University of Illinois College of Medicine, effective January 1. The appointment fills the vacancy created when Dr. Arthur Kirschbaum resigned in 1954 to assume the anatomy department direction at Baylor University College of Medicine. Dr. Parke H. Simer has been serving as acting head of the department at Illinois. Dr. Reynolds received his A.B. and M.A. degrees from Swarthmore College, Swarthmore, Pa., and his Ph. D. from the University of Pennsylvania in 1931. Currently he is director of the department of embryology at the Carnegie Institute of Washington, where he has been serving since 1941.

Appointments at University of Chicago.—Dr. Ruth Rhines, a neuroanatomist specializing in the study of the development of the nervous system, has been appointed associate professor of anatomy at the University of Chicago School of Medicine. William K. Baker, geneticist, has been named to the faculty as associate professor of zoology.

DUPAGE

Personal.—John E. Milton, Evanston, was recently appointed administrator of the new Edward Hospital in Naperville.

ST. CLAIR

St. Clair Society News.—Dr. Grey Jones, As-

sistant Clinical Professor of Obstetrics and Gynecology, St. Louis University School of Medicine, addressed the St. Clair County Medical Society recently on "Retrodisplacement of the Uterus".

SANGAMON

Bulletin Receives Award.—The Bulletin of the Sangamon County Medical Society has received an Honor Award for Distinguished Service in Medical Journalism from the American Medical Writers' Association. The presentation was made at the Association's annual meeting in St. Louis, September 30. The Sangamon Bulletin award is in the category of publications of county and city medical societies whose membership is less than 500. No award has previously been given in this classification. A plaque symbolizing the award was received by the Bulletin editor, Jacob E. Reisch, M.D. at the Association's annual banquet.

The Honor Award comes to the Bulletin after 20 years of continuous publication. It was on October 3, 1935, that Doctor Schnepp proposed that the County Society establish a monthly publication. A committee of five consisting of Doctors Staben, then president of the Society, Schnepp, Graham, Herndon, and Henkel, was instructed to consider and effect the project. The first issue appeared in January, 1936. In March, 1936, by an amendment to the by-laws, the Bulletin became the official publication of the Sangamon County Medical Society. The amendment provided for an Editorial Board of five members to determine details and policies of advertising and editorial material. The original committee of organization was appointed as the Editorial Board with Doctor Schnepp to serve five years, Doctor Graham four years, Doctor Staben three years, Doctor Henkel two years, and Doctor Herndon one year.

Doctor Schnepp continued as editor until 1942, when his military service made a replacement necessary. Dr. Murray E. Rolens, author of the "Corn Crib," a feature of the bulletin, assumed editorship at this time and continued until 1946, when Doctor Schnepp returned. In 1948, editorship was assigned to Doctor Reisch, who still holds the position.

During the past several years the bulletin has grown from a 16 to a 48 page publication, with a state-wide circulation of almost 1,000. Numerous new departments have been included in its contents to add to its interest and value. Due credit and appreciation from the Sangamon County Medical Society must be expressed to the Bulletin's advertisers, local firms and national organizations, and to its publishers, Schnepp and Barnes, who have made its publication and success possible and who should share in this award.

Society News.—Dr. Lindon Seed, clinical associate professor of surgery, University of Illinois College of Medicine and Director of the Isotope Laboratory at Augustana Hospital, discussed "Newer Aspects in the Treatment of Thyroid Disease" before the Sangamon County Medical Society at a dinner meeting in the Elks Club, Springfield, November 3. Dr. George Milles, associate professor of pathology at Illinois and Pathologist at Augustana, spoke on "Pathologic Physiology of Thyroid Disease."

WARREN

Ernest Irons Gives Three Talks in Monmouth.—Ernest Irons, Past President of the American Medical Association, addressed the monthly forum of the Presbyterian Church in Monmouth, Sunday night, November 13. The title of his talk was "Professional Education for Citizenship." Dr. Irons also addressed a meeting of the faculty and student body of the Monmouth College in the morning and the dinner meeting held annually at which the Rotarians act as host to the Kiwanians.

WINNEBAGO

Television Series a Success.—"Your Baby and You," a television series being presented by the Winnebago County Medical Society, has been well received, according to the Bulletin of the Winnebago County Medical Society. The physicians who appeared in the early weeks of the series were Dr. E. T. Leonard, Jr., on immunizations; Dr. A. Currie Maimon, on "Growth and Development, From Infancy to Six Months," and Dr. J. Howard Laubscher, "Growth and Development; Six Months to One Year."

GENERAL

Chicago Born Scientist Wins Nobel Prize.—Vincent du Vigneaud, Ph.D., has won the 1955 Nobel prize in chemistry for his work in two hormones that help in childbirth and keep a check on vital organs, such as the kidneys, newspapers reported. The prize amounted to $36,720. Dr. du Vigneaud was born in Chicago. He received his bachelor of science degree in chemistry at the University of Illinois in 1923 and his master's degree in 1924. He returned to the Urbana faculty as assistant professor in the department of chemistry, serving from 1929 to 1932.

Institute on Premature Baby Care.—"Community Planning for Better Care of Premature Infants" was the theme of an institute, October 19, 26 and November 9. The first two sessions were held at the Little Company of Mary Hospital in Evergreen Park and the third session in the auditorium of the American Medical Association. The institute was designed for nurses in maternity departments of hospitals as well as the public health nurses who make home visits to premature babies following discharge from the hospital. The area covered Chicago and surrounding counties: Will, Kane, Lake, and DuPage. The institute was sponsored by the Illinois State Department of Public Health, local health departments and hospitals.

Among the subjects covered were: the physiology and care of premature babies; prevention and treatment of infant diarrhea, retrolental fibroplasia, and erythroblastosis fetalis; public health significance of

prematurity; and the physical facilities necessary for the care of premature infants.

Carl Moore Dies.—Carl R. Moore died October 16 in Billings Hospital, Chicago. Moore was an outstanding pioneer in the study of sex and the mechanism of its development, and the hormonal control of reproduction. He began his studies before sex hormones were isolated and contributed to their isolation. In medicine, his work on the effect of hormones aided in the development of treatment for prostate cancer in men and breast cancer in women. He had been a member of the faculty of the University of Chicago since 1914.

"Your Doctor Speaks" on FM Station WFJL.—The following physicians have recently appeared in transcribed broadcasts of **FM Station WFJL, Thursday evenings, at 7:45 p.m.** The series, entitled "**Your Doctor Speaks,**" is presented by the **Educational Committee** of the **Illinois State Medical Society:**

Donald I. Bell, instructor in medicine, Northwestern University Medical School, October 27, on Understanding Diabetes.

Melvin F. Blaurock, director of the Oak Park Neuropsychiatric Clinic, November 3, on What Is Our Future?

Richard A. Buckingham, assistant professor of otolaryngology, University of Illinois College of Medicine, November 10, on Preservation and Restoration of Your Child's Hearing.

Louis Malow, associate professor of surgery in the department of proctology, Chicago Medical School, November 17, on Painful Conditions of the Rectum.

Lectures Arranged Through the Educational Committee of the Illinois State Medical Society:

F. M. Nicholson, a member of the Committee on Nursing of the Illinois State Medical Society, Schurz Lee Tri Hi Y, November 15, on Nursing as a Career.

Morris Fishbein, professional lecturer at the University of Chicago School of Medicine, American Association of Blood Banks, November 20, on Medical Progress, 1955.

Joseph T. O'Neill, Chairman of the Council of the Illinois State Medical Society, Sheridan Elementary School P.T.A., November 21, on Child Psychology.

Winston H. Tucker, Commissioner of Health of Evanston, Women's Council of Max Strauss Center, November 22, on Evolution of Salk Vaccine.

Lectures Arranged Through the Scientific Service Committee of the Illinois State Medical Society:

Coye Mason, clinical assistant professor of pathology, University of Illinois College of Medicine, Ford County Medical Society at the Middlecoff Inn, Paxton, November 15, on Pathology of Common Diseases.

Aldo A. Luisada, associate professor of medicine, Chicago Medical School, LaSalle County Medical Society at the Kaskaskia Hotel, LaSalle, December 8, on Common Errors of Ascultation Revealed by Phonocardiography.

William H. Wehrmacher, instructor in medicine, Northwestern University Medical School, Whiteside-Lee County Medical Societies in Rock Falls, December 15, on Does That Pain in the Chest Mean Heart Disease?

John F. Hubbard, Mattoon, Wayne County Medical Society at the Fairfield Memorial Hospital, Fairfield, December 15, on Hysterectomy.

DEATHS

Frederick A. Berry*, Chicago, who graduated at the College of Physicians and Surgeons of Chicago, School of Medicine of the University of Illinois, in 1908, died October 11, aged 74.

Edgar O. Breakstone*, Chicago, who graduated at the Chicago Medical School in 1937, died November 3, aged 47.

Herman P. Davidson*, Chicago, who graduated at Johns Hopkins University School of Medicine in 1917, died October 9, aged 62. He was a member of the staffs of the Presbyterian and Chicago Memorial Hospitals.

Bourke Firfer*, Chicago, who graduated at the University of Illinois College of Medicine in 1938, died October 13, aged 42. He was vice president of the medical staff at the South Shore Hospital.

Thomas J. Foster, De Soto, who graduated at St. Louis University School of Medicine in 1903, died recently, aged 84. He had practiced medicine in Franklin, Williamson, Jackson, and Macon Counties before going to De Soto nine years ago.

Julius H. Hess*, Chicago, who graduated at Northwestern University Medical School in 1899, died November 2, aged 79, while on a vacation in Los Angeles. He was professor emeritus of pediatrics at the University of Illinois College of Medicine; senior attending physician and past staff chairman of Michael Reese Hospital, and past attending pediatrician and chairman of the Cook County Hospital pediatrics department.

Walter Louveria Hougland, Chicago, who graduated at St. Louis University School of Medicine in 1905, died September 13, aged 79.

Eugenia A. Klawans*, retired, Wilmette, who graduated at Reliance Medical College, Chicago, in 1910, died October 15, aged 69. She was known professionally as E. A. Miller.

James U. Long, Knoxville, who graduated at Missouri Medical College in 1888, died in Galesburg Cottage Hospital, August 15, aged 91, of lymphatic leukemia.

Frank J. Maha, retired, Dundee, who graduated at Bennett Medical College, Chicago, in 1900, died November 7, aged 81.

Ralph Rowland McCarthy, Downey, who graduated at the College of Physicians and Surgeons of

*Indicates member of the Illinois State Medical Society

Chicago, School of Medicine of the University of Illinois, in 1911, died June 9, aged 71, of pulmonary edema and emphysema.

John H. Opitz*, Chicago, who graduated at Loyola University School of Medicine in 1917, died October 16, aged 62.

Benjamin Perry, Chicago, who graduated at the College of Physicians and Surgeons of Chicago, School of Medicine of the University of Illinois, in 1905, died August 6, aged 78, of coronary occlusion.

William A. Rosenberg*, Chicago, who graduated at Loyola University School of Medicine in 1918, died November 3, aged 62. He was a member of the staff of Michael Reese Hospital.

Adolph J. Rosenblate*, Chicago, who graduated at Kiev Medical Institute, Kiev, Ukranian S.S.R., in 1928, died October 12, aged 62. He was director of the radiology department of Englewood Hospital.

Lloyd Albert Schipfer*, Chicago, who graduated at the State University of Iowa College of Medicine in 1907, died October 15, aged 71.

Louis Willard Shabat*, Chicago, who graduated at the University of Illinois College of Medicine in 1931, died October 21 of a heart attack shortly after addressing a noon meeting of the Chicago Bar Association. He was 48. He had gained national prominence as a medico-legal expert.

Louis Abbott Vertuno, Oak Park, who graduated at the Chicago College of Medicine and Surgery in 1911, died October 13, aged 72. He was a member of the staff of West Suburban Hospital.

J. C. Westervelt, Shelbyville, who graduated at Bennett Medical College, Chicago, in 1878, died October 30, aged 100. He was honored last year by the American Medical Association as the nation's oldest practicing physician.

*Indicates member of the Illinois State Medical Society.

New York City in 1970

Many surveys have indicated that the suburbanite is in the middle income bracket, he is professionally or technically trained, and frequently has better than average education. Thus, the central cities are losing these people so necessary for a balanced community life. A recent report in the New York Times predicted that in 1970 New York City would consist of Puerto Rican and non-white populations to the extent of 28 per cent of the total population. This figure would represent large immigration. It would also represent important emigration—to the suburbs, in all probability. The ratio of old people to other groups is increased in central cities because of the outward movement of the younger groups. Conversely, suburbs have young groups with high percentages of children. The New York Times report also commented on this in predicting that by 1970 one in every eight in the city would be 65 years old or older. *Francis B. Elder. Effects of Suburbanization on Public Health in New Jersey. Public Health News, New Jersey Dept. of Health, June 1955.*

The cancer age

There is a positive correlation between cancer incidence and chronological age—the older the person, the greater the likelihood of cancer. Half of the people diagnosed with cancer were between 50 and 70 years of age. However, large variations exist between men and women relative to the parts of the body where cancer is found and the ages at which the disease manifests itself. Men appear more susceptible to cancer than women in the first two and the last two or three decades of the usual lifetime, whereas women have a higher rate during the childbearing years. In fact, at about age 35, approximately twice as many women as men are found to have a malignant tumor. After the childbearing period, however, the rate for males catches up with and exceeds the rate for females. *Harold F. Dom and Sidney J. Cutler. Cancer Morbidity in the U.S. Pub. Health Rep. July 1955.*

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—Amos Parrish

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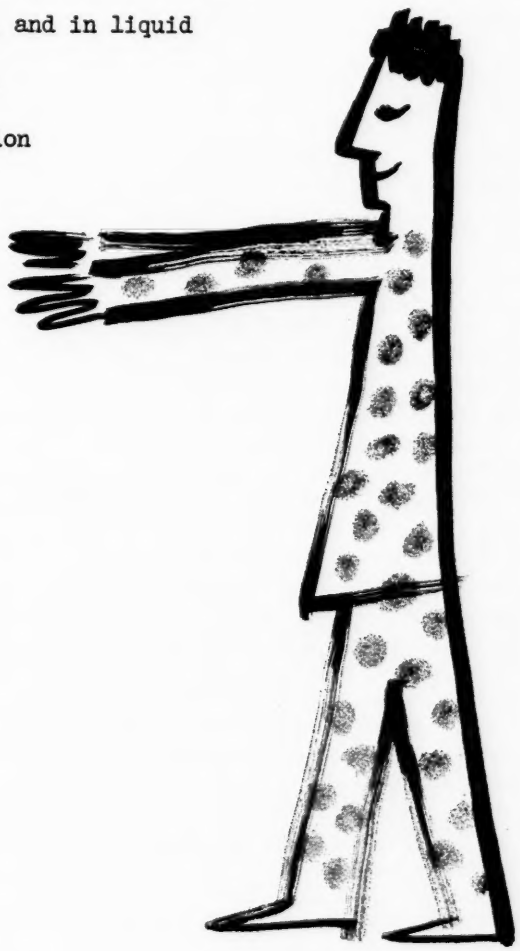

BOOK REVIEWS

KINESIOLOGY OF THE HUMAN BODY. Under Normal and Pathological Conditions. Arthur Steindler, M.D., Eng. F. A. C. S., F. I. C. S., (Hon.) F. R. C. S. Professor of Orthopedic Surgery Emeritus, State University of Iowa. Head of Orthopedic Department, Mercy Hospital, Iowa City, Iowa. $19.75. 691 pages. Charles C. Thomas, Springfield, Illinois.

This volume is divided into "parts;" each of the four parts is made up of so-called lectures. Part one deals with "General Kinetics" the physical properties of various tissues affected in motion. In this, attention if directed to the pages on cartilage will be well rewarded. To read this requires definite concentration. The very smallest items receive detailed description and logical deduction follows portraying the factual changes that result from motion changes. The reading flows easily, because of the author's style, but understanding the concept requires additional thought beyond the printed words. It makes one think. It might be said of this text, that its perusal will educate the reader in exactness of expression as well as in the actual facts of the subject itself.

What has been said of the work on cartilage is true of all subjects considered.

Part One deals also with The Mechanics of Joint and Muscle Action, Body Balance & Equilibrium, and the Measurement and Computation of Bodily Motion.

Part Two deals with Kinetics of the Trunk and in this also Respiration and Posture.

Part Three details the Mechanics of the Extremities and Joints and with the Pathomechanics of the Paralytic Joints. Also considered are sprains and fractures.

Part Four covers gait. And in addition to the Kinetics of normal gaits, pathological gaits including all varieties are evaluated. Even the prosthetic gaits are given well deserved space.

The jacket in which the book appears, among other statements says "it should be profitable reading not only for the educator", but particularly for the orthopedic surgeon and the physiatrist, whose efforts in rehabilitation stand and fall to the degree of serious interest and understanding *in the mechanics of normal and pathological locomotion.*

The index enables easy access to the subject desired; the printing is easily read, on paper "easy on the eye", and the arrangement of the text is admirable. There are illustrations, drawings, and photographs too numerous to calculate.

C. P. B.

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COLLECTED PAPERS OF THE MAYO CLINIC AND THE MAYO FOUNDATION Edited by: Richard H. Hewitt, M.D., A. B. Nevling, M.D., John R. Miner, B.A.,Sc.D., James R. Eckman, A.B., M.A., Ph.D., M. Katherine Smith, B.A., Carl M. Gambill, M.D., Florence Schmidt, B.S.E., George G. Stilwell, M.D., 46th edition. $12.50 W. B. Saunders Company Philadelphia and London, 1955.

The material in this volume is composed of 629 papers, 62 appearing in full, 52 by abridgement, 20 by abstract and 495 by title only. The material was selected carefully with the interests of the general practitioner, the specialist and the diagnostician in mind. The field of medicine is well covered in this current volume, beginning with lesions of the alimentary tract, 127 pages being devoted to this subject.

A considerable amount of space is devoted to considerations of the blood and circulatory or-

(Continued on page 44)

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gans. In this section the subject of anticoagulant therapy is given quite a little attention, and several papers deal with myocardial infarction, and with the newer types of surgery for the atrial septal defects. There are many interesting papers in this volume, as would be expected from those published in previous years.

The subject matter is well arranged and it is easy for the busy practitioner to find the subject of greatest interest at the moment.

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BOOKS RECEIVED

The following books have been received for reviewing, and are herewith acknowledged. This listing should be considered as a sufficient return for the courtesy of the sender. Books that appear to be of unusual interest will be reviewed as space permits each month. Readers desiring additional information relative to books listed, may write the Editor who will gladly furnish same promptly.

POLIO PIONEERS — The Story of the Fight Against Polio. By Dorothy and Philip Sterling. With Photographs by Myron Ehrenberg and the National Foundation for Infantile Paralysis. Doubleday & Company, Inc. Garden City, New York. $2.75.

A TEXTBOOK OF CLINICAL PATHOLOGY. Edited by Seward E. Miller, M.D., Medical Director, United States Public Health Service; Chief, Division of Special Health Services, Washington, D. C. Fifth edition. The Williams & Wilkins Company, Baltimore. $11.00.

CLINICAL ANALGETICS. By E. G. Gross, Ph.D., M.D., Professor and Head of Department of Pharmacology, State University of Iowa, College of Medicine, Iowa City, Iowa, and M. J. Schiffrin, Ph.D., Assistant Director of Clinical Research, Hoffmann-LaRoche, Inc., Nutley, New Jersey. Charles C. Thomas, Publisher, Springfield, Illinois. $3.00.

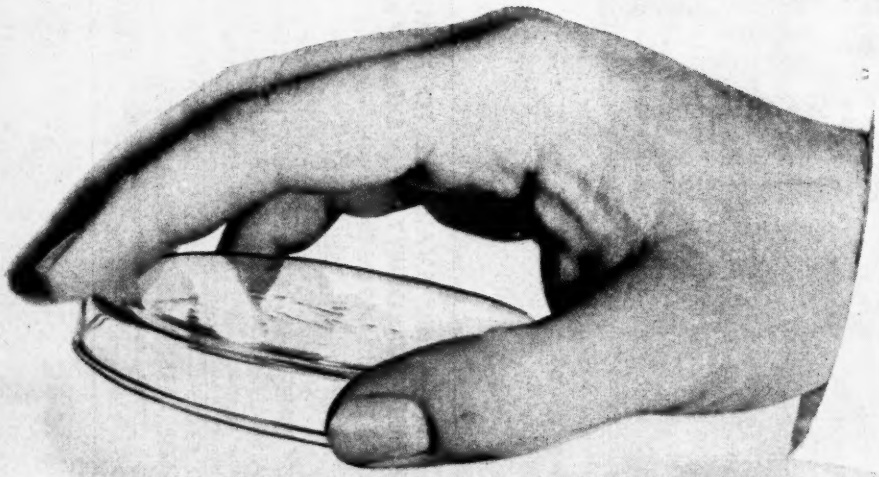
CLASSICS OF BIOLOGY. By August Pi Suner. Authorized English translation by Charles M. Stern. Philosophical Library, New York. $7.50.

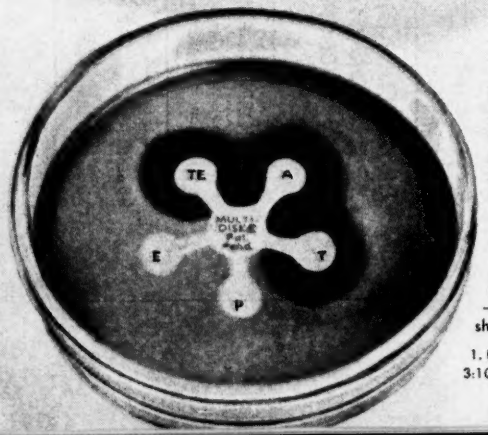
PLANNING FLORIDA'S HEALTH LEADERSHIP. Medical Education in the University. Edited by Louis J. Maloof. University of Florida Press, Gainesville, Florida. $1.50.

THE RELIEF OF SYMPTOMS. By Walter Modell, M.D., F. A. C. P., Associate Professor of Clinical Pharmacology, Cornell University Medical College. 450 pages. W. B. Saunders Company, Philadelphia and London, $8.00.

PREVENTIVE MEDICINE IN WORLD WAR II. Medical Department, United States Army. Volume 11 — Environmental Hygiene. Editor in Chief, Colonel John Boyd Coates, Jr., MC, Editor for Preventive Medicine, Ebbe Curtis Hoff, Ph.D., M.D., Office of the Surgeon General, Department of the Army, Washington, D. C., 1955.

CORTICOTROPIN: Its Pharmacologic Effects in Man and Practical Therapeutic Utilization. By Gordon B. Myers, M.D., and William Q. Wolfson, M.D., Wayne University College of Medicine and Detroit Receiving Hospital, Wayne University Press, Detroit, 1955.





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1. Eisenberg, et al., Antib. & Chemo., 3:1026-1028, Oct., 1953.

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Accreditation troubles

The heights or depths of absurdity in the wild career of our bureaucracy gone to seed would seem to have been reached in the matter of compulsory attendance upon staff meetings at the Los Angeles County Hospital, where we have a membership in excess of 1,200 members of the Los Angeles County Medical Association, all freely giving their time to the indigent sick of the county. Under our masters' (The Joint Commission on Accreditation of Hospitals) decree, we must have at least four meetings a year with a 75 per cent staff attendance. This would require a hall large enough to accommodate 900 physicians. There is no such hall on the hospital grounds nor anywhere within a reasonable distance thereof. Consultation with the director of the Commission revealed him to be adamant in this requirement and to refuse utterly to give credit to physicians for attending the many section meetings held in the hospital every month. His only suggestion was a shrugging reference to the documentary essential for accreditation and the statement that staff attendance itself was only one of the long list of requirements; that failure in that particular instance would not necessarily bar a hospital from the coveted approval. While this ruling has been somewhat ameliorated after considerable pressure upon our masters, nonetheless it illustrates beautifully what happens when power is unduly and unwisely concentrated. *L. A. Alesen, M.D. Private Bureaucracy Gone to Seed. Bull. Acad. Med. Toledo and Lucas Counties. Nov.* 1955.

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The incidence of persons now harboring tubercle bacilli varies greatly in different parts of the world. In nations with large populations where little effective tuberculosis control work has been done, so many children become infected that nearly all adults possess at least lesions of primary complexes containing tubercle bacilli. Among such people, a correspondingly high incidence of clinical tuberculosis is present. J. Arthur Myers, M.D., Journal-Lancet, April, 1955.

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The Altered Prognosis in Diabetes Mellitus

Diabetes mellitus — the elevation of the sugar level of the blood and urine — is now believed to have one or more of these five causes:

1. Insulin deficiency
2. Liver deficiency
3. Pituitary gland deficiency
4. An insulin antagonist in the tissues
5. An abnormal substrate in the tissues that interferes with the normal chain or reactions involving insulin.

These possibilities are now under investigation, and the research may lead to a cure for diabetes.

Physicians' concepts of diabetes have changed considerably in recent years, particularly with the introduction of longer-acting insulins in 1938. Before insulin, the sole effort was to keep patients alive. At best, juvenile patients died in about nine months' time. Today diabetic youngsters live out normal life spans and enter all occupations.

Long-acting insulins have wiped out the fear of acute infection due to diabetes. Carbuncles, once very serious, are now uncommon. It was once rare for a woman diabetic to give birth to a live child. Today at least 80 per cent of such children are born alive, and maternal mortality is no different from that of nondiabetic women.

The diabetic in industry no longer faces acute sepsis and prolonged convalescence if he is cut or bruised. This has enabled life insurance companies to issue group life insurance to large groups of persons without considering diabetics among them as added risks.

The control of diabetes with long-acting insulins has enabled some life insurance companies to write policies on diabetics on an extra risk basis. At some future time, when physicians can differentiate the basic cause of diabetes, diabetics may become insurable at standard rates.

While insulin has led to effective control of diabetes, the incidence of the disease has been greater. Essentially, it is a disease of middle and older age. The lengthening of the life span means that more people are living to develop diabetes. At the same time younger diabetics who once would have died of diabetes are living

(*Continued on page* 54)

a standard by which to judge

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DIABETES MELLITUS (Continued)

out their normal years despite the disease. At the present time it is estimated that there are 2,000,000 diabetics, known and unknown in the United States.

Summary of paper by Herbert Pollock, M.D., 64th annual meeting of the Association of Life Insurance Medical Directors of America.

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The wrong patient

Two women were discussing their medical problems. One, an insecure individual who attempted to counteract her insecurity by maintaining control over other people, said, "Dr. A. was so arbitrary I couldn't stand him. He would just order me to do this and that and never tell me why. Now I go to Dr. B. who always takes time to explain the reasons for everything he asks me to do."

The other, a rather helpless and dependent person, replied, "I couldn't stand Dr. B's insistence on telling me all about everything that's wrong with me. I finally gave up and went to Dr. A. He makes me feel so safe; I can leave everything up to him and just follow his instructions, and I know things will turn out all right." *C. Knight Aldrich, M.D. Psychiatry for the Family Physician. McGraw-Hill Book Co.,* 1955.

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Temperature

An electronic clinical thermometer, which is used like an ordinary thermometer, has been developed. Current from a flashlight battery is passed through metal oxides that are imbedded with wires in the glass rod. The oxides change resistance in precise ratio with the body temperature and give the temperature, accurate to a tenth of a degree, in a 5 second period. *Lee B. Lusted, M.D. Medical Electronics. New England J. Med. April* 7, 1955.

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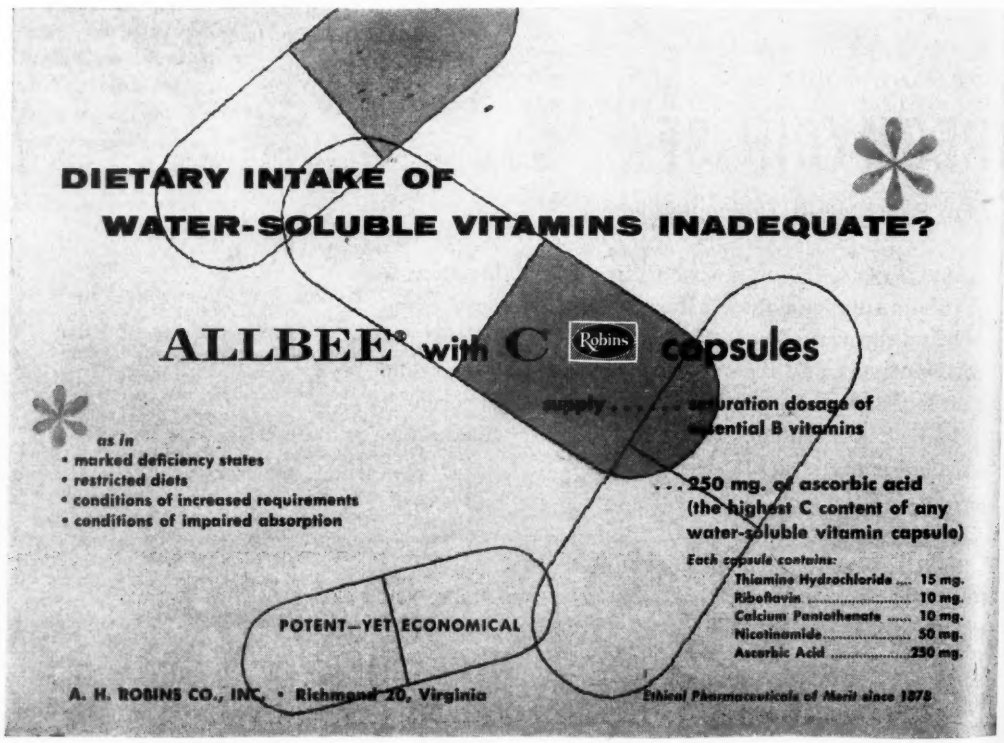
A fresh mind keeps the body fresh. Take in the ideas of the day, drain off those of yesterday. As to the morrow, time enough to consider it when it becomes today. —*Bulwer*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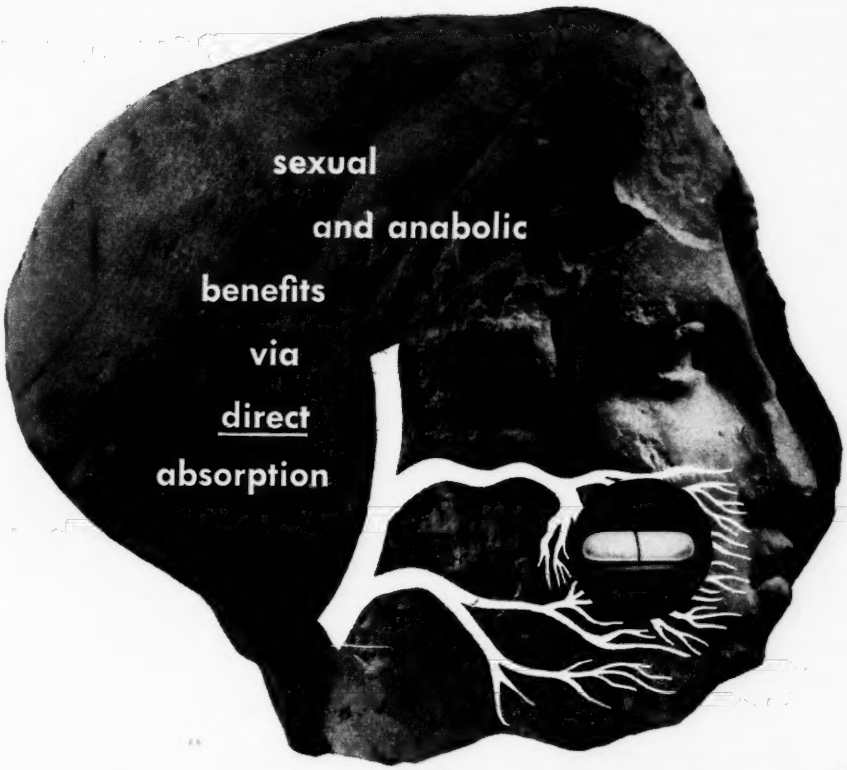

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Physicians' estates statistics

A recent study made by the Hartford County (Conn.) Medical Society of 144 obituaries of local physicians and probate court cases involving their estates reveals some illuminating and startling facts which should make any physician do a bit of checking on his own financial status and on just how fair he is being to his own health.

The study revealed the following, according to an article in the Hartford Times and abstracted by the New England Mutual Life Insurance Company's official bulletin, "The Pilot's Log:"

One out of eight of the physicians who died between 1940 and 1953 was in debt at the time of death. Of the 144 doctor estates studied, one out of three . . . left net assets of less than $10,000. The Hartford survey disclosed only one extremely wealthy doctor out of the 144 and that $575,915 of his estate was consumed by estate taxes and other settlement expense.

Only one doctor in eight survived his wife. The doctors aged 40 to 50 died twice as fast as the general population, and in the 60-70 bracket, the doctor's death rate was 50 per cent higher than the insurance table. Heart diseases and cerebral hemorrhage were the chief causes of death. Expense of settlement of the estates studied ranged from a minimum of 13 per cent to as much as one-third. The age at death of the physicians when compared with life insurance mortality tables showed that there were two vulnerable age periods for medical men: 40 to 50 and 60 to 70. One out of three physicians left no will. *Estates of Physicians. New York Med. Sept.* 20, 1955.

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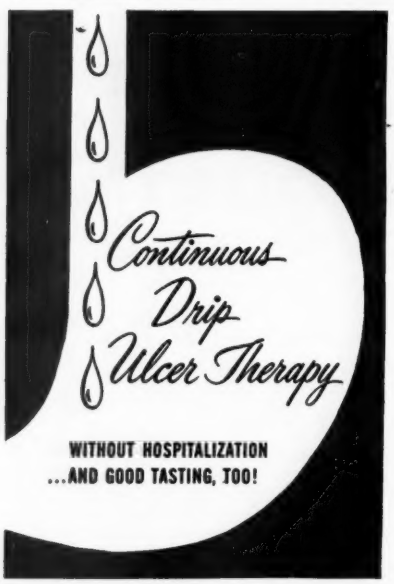
Some chronic conditions are preventable; some are deferable; some are curable; and some are modifiable. We know how they are spread and how to prevent their spread. Some conditions, such as diabetes or rheumatic heart disease, are deferable even where there is a tendency toward it, if the appropriate medical care is provided in time. Some conditions, such as pernicious anemia or cerebral hemorrhage, are modifiable. *Daniel Bergsma, M.D., New Jersey, Pub. Health News, April, 1955.*



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*Steigmann, F., and Goldberg, E.: Ambulatory Continuous Drip Method in the Treatment of Peptic Ulcer, Am. J. Digest. Dis. *22*:67 (Mar.) 1955.

†Mg trisilicate 3.5 gr.; Ca carbonate 2.0 gr.; Mg oxide 2.0 gr.; Mg carbonate 0.5 gr.

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More for health

Compared with last year, the Department of Health, Education, and Welfare is spending 32 per cent more in the health fields. The increase — $127,754,900 — is explained largely by sharp boosts in funds for Hill-Burton hospital construction, for vocational rehabilitation, for medical research, and for the medical care of the indigent, and by a $30 million appropriation to purchase Salk vaccine and finance inoculation campaigns. Total federal health spending also will reach a new high of over two and one-quarter billion dollars during the current fiscal year, about $2,268,800,000 — a 6.4 per cent increase over last year. Even in a national health budget well up in the billions, this figure for federal medical-health spending is not inconsequential. It is about 15 times the amount needed to maintain Congress and the federal courts, 14 times the total budget of the State Department, and four times more than is spent by either the Labor Department or the Post Office Department. Expressed another way, Uncle Sam puts up $15 of every $100 spent by the American people (publicly or privately) for health and medical purposes, from purchase of toothpaste to financing cancer research. *Special Report* 84-15, *Amer. Med. Assn. Oct.* 14, 1955.

‹ ›

Peptic ulcer in oldsters

Some interesting points are found with regard to the location of peptic ulcer in older patients. In the population as a whole there probably are 10 duodenal ulcers to every gastric ulcer. In the aged, this ratio falls to about 3.5:1. Some correlation may exist between gastric ulcer and degenerative arterial disease which may be of clinical importance, especially in connection with the cause of gastric ulcer and the seriousness of bleeding from them. *Albert M. Snell, M.D. Digestive Ailments of Older Patients. Minnesota Med. May* 1955.

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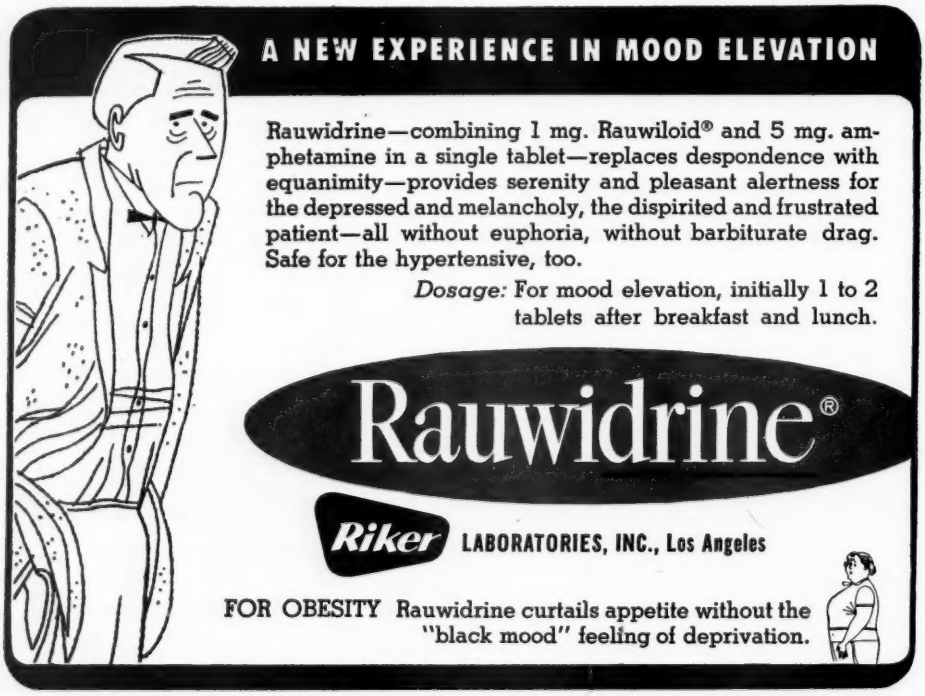
Nothing is ever lost by courtesy. It is the cheapest of the pleasures; costs nothing and conveys much. It pleases him who gives and him who receives and thus, like mercy, is twice blessed.—*Erastus Wiman*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Bibliography: (1) Bunim, J. J.; Pechet, M. M., and Bollet, A. J.: J.A.M.A. *157*:311, 1955. (2) Waine, H.: Bull. Rheumat. Dis. *5*:81, 1955. (3) Tolksdorf, S., and Perlman, P.: Fed. Proc. *14*:377, 1955. (4) Herzog, H. L., and others: Science *121*:176, 1955. (5) Bunim, J. J.; Black, R. L.; Bollet, A. J., and Pechet, M. M.: Ann. New York Acad. Sc. *61*:358, 1955. (6) Henderson, E.: New developments in steroid therapy of rheumatic diseases, presented at New Jersey State Medical Society Meeting, Atlantic City, New Jersey, April 17-20, 1955. (7) Boland, E. W.: California Med. *82*:65, 1955; abs., Curr. M. Digest *22*:53, 1955. (8) King, J. H., and Weimer, J. R.: A.M.A. Arch. Ophth. *54*:46, 1955. (9) Criep, L. H.: Prednisolone and prednisone in the treatment of allergic diseases, to be published. (10) Sternberg, T. H., and Newcomer, V. D.: Am. Pract. & Digest Treat. *6*:1102, 1955. (11) Gordon, D. M.: Prednisone and prednisolone in ocular disease, to be published.

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*T.M.

ML-J-59

The neophyte

It is easy to speculate about the nature of circumstances in medical education which might possibly foster the formation of attitudes (in medical students) and other seemingly unhygienic reaction tendencies which have been noted. These speculations now lack corroboration; but the kinds of experience which might possibly be important and whose effect should be assessed are such occurrences as the initial experiences with the cadaver, with the death of a patient, and with chronic or hopeless disease. Also important are initial experiences with physical, gynecological, or rectal examinations of patients of the same and opposite sex, autopsies, venereal patients, lumbar punctures, etc. Of interest are such things as the fear of error in diagnosis or prescription, the fear of contagion, the threat of failure in school, protracted sexual conflicts, the conflict between research and practice, the long-term conflict over the dependent role the student usually must assume, the effect of limited recreational and social outlets, the growing realization of the student that persons will do implicitly what he orders despite his own sense of inadequacy in dealing with their problems. *Leonard D. Eron, M.D. Effect of Medical Education on Medical Students' Attitudes. J. Med. Education, Oct.* 1955.

‹ ›

Brittle nails

Chemical analysis of brittle nails failed to reveal any decrease in mineral content—results which confirm the long held view of dermatologists that there is no basis for the administration of calcium to patients with brittle nails. *Herbert Rattner, M.D. What's New and What's True of What's New in Dermatology. California Med. July 1955.*

‹ ›

Most public health people believe today that good health cannot be forced upon individuals, but when they are educated to its advantages and its values, they work to secure its benefits for themselves, their families and their communities. Leroy E. Burney, M.D., Am. J. of Pub. Health, Feb., 1955.

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*Georges Ray, Vins de France, Paris, University Press, 1946 (p. 75).

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Irradiated food

Developments in radiation sterilization of foods received wide attention at the 15th Annual Meeting of the Institute of Food Technologists in Columbus, Ohio, last month. At present there are more limiting factors than promising possibilities, but speakers reminded the food technologists that these are pioneer days in the radiation era. Present status in general is: High voltage cathode rays will sterilize a wide variety of foods in a matter of seconds. However, at high levels, undesirable changes in flavor, color, and odor occur in most foods. The inactivation of enzymes requires more exposure than do the micro-organisms that are common causes of food spoilage. Clostridium botulinum, the most dreaded of the organisms attacking food, requires varying dosages according to type, but all are on the extreme side. Nutritional effects are not yet fully assessed but the picture is not too dark, on the basis of preliminary returns.

Proctor and associates from Massachusetts Institute of Technology reported that cathode ray treatment of meat and vegetable products can extend storage life at refrigerator temperatures above freezing from several weeks to several months. At the University of Michigan, L. W. Brownell and H. A. Harlin have found that gamma radiation of cake, bread, and all purpose flours at a fairly low dosage (20,000 rep) did not affect baking properties of the flours, and that insects and weevils were destroyed. Eggs of insects also were made sterile at this level of treatment. Dr. Charles Glen King, Scientific Director, The Nutrition Foundation, Inc., reviewed studies of the effects of radiated foods fed to animals. A vitamin E deficiency developed when irradiated meat was included in the experimental diet. However, no evidence of specific abnormalities were observed in the tissues of the experimental animals. Drs. G. M. Dack and R. O. Wagenaar, Food Research Institute, University of Chicago, have found high resistance to irradiation in Clostridium botulinum spores inoculated into surface ripened cheese. It took 800,000 to 1,100,000 rep to in-

(*Continued on page* 64)

in whooping cough

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IRRADIATED FOOD (Continued)

activate type A spores; 550,000 rep to inactivate type B. At high toxin levels, 7,800,000 rep were required.

For those expecting an answer to the question: How far is radiation sterilization from the goal of commercial use, the candid answer would have to be expressed in terms of years. *Radiation Sterilization. J. Am. Dietet. A. July* 1955.

‹ ›

Define the term

Any talk on the social and economic aspect of a medical problem has to reach some definitions of the various factors involved. Here we would like to define such terms as "long-run illness" and "ability to pay." When we attempt to do so we find that both are variables and much dependent one on the other. Obviously, ability to pay decreases with the length of an illness and vice versa. The majority of middle income people can pay the costs of short-term illness without any real difficulty, while only the upper income groups, or perhaps 10 per cent of the nation, can get by an illness of several months or years without serious financial embarrassment. *I. Jay Brightman, M.D. Medicsocial and Economic Aspects of the Long-term Illness Problem. New York J. Med. May* 1, 1955.

‹ ›

Too much digitalis

Overdigitalization can be the cause of increasing cardiac decompensation. This is often accompanied by premature ventricular contractions, arrythmias, and various degrees of heart block. With digitoxin there are often cardiac signs before nausea, vomiting, and ocular difficulties supervene. Therefore, despite increasing congestive failure, it may be necessary to withdraw the digitalis. The speed of elimination of digitalis preparations differs markedly. It may take 10 to 14 days to eliminate a toxic dose of digitalis. A toxic dose of digoxin, on the other hand, may be eliminated in 36 to 48 hours. Therefore, the type of digitalis preparation is important in assessing how long the patient will be off the drug. *John F. Currin, M.D. Problems in the Treatment of Refractory Cardiac Failure. Arizona Med. May 1955.*

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The need for security

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‹ ›

Variety for the diabetic

The ADA Diet provides every variety of food which the nondiabetic patient normally eats, except sugar. Substitutes for this form of carbohydrate, such as Sucryl® and crystallose, are real improvements over saccharin with its bitter after taste. Diabetic candy and soft drinks such as ginger ale, orange and root beer made with a sugar substitute also are now on the market. These are useful especially in children to help eliminate the feeling of being different. It must be emphasized that these are substitute items. The patient should not only adhere to his designated diet but know it so well he can eat in public gatherings in complete ease. *Carl S. Nadler, M.D. Some Practical Aspects of the Dietary Treatment of Diabetes Mellitus. J. Louisiana M. Soc. May* 1955.

‹ ›

If one should give me a dish of sand, and tell me there were particles of iron in it, I might look for them with my eyes, and search for them with my clumsy fingers, and be unable to detect them; but let me take a magnet and sweep through it, and how would it draw to itself the almost invisible particles by the mere power of attraction! The unthinkful heart, like my finger in the sand, discovers no mercies; but let the thankful heart sweep through the day, and as the magnet finds the iron, so it will find in every hour some heavenly blessings.

—*Henry Ward Beecher*

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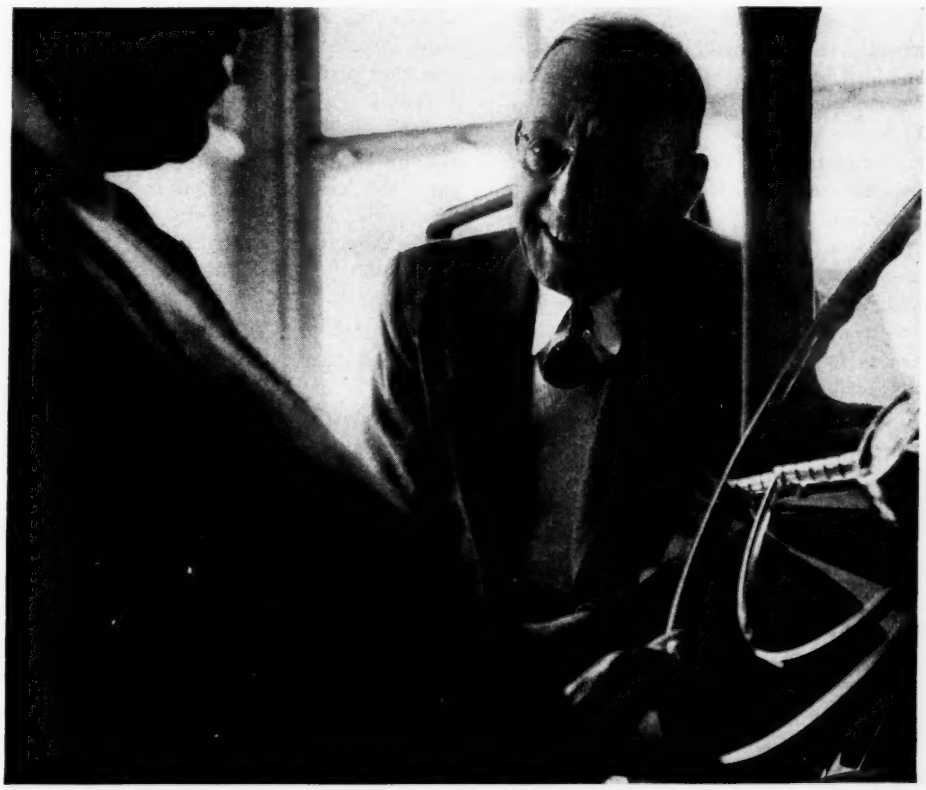

"Old age" is getting harder to define. Some of today's working men and women can claim 40, 50, or even more years of experience in their fields—and they're still not ready to retire! To help keep such vigorous folks fit and on the go, many doctors prescribe GEVRAL, a potent dietary supplement prepared specially for geriatric use.

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Thiamine Mononitrate (B_1)	5 mg.	Vitamin E (as tocopheryl acetates)	10 I. U.	Copper (as CuO)	1 mg.
Riboflavin (B_2)	5 mg.	Rutin	25 mg.	Fluorine (as CaF_2)	0.1 mg.
Niacinamide	15 mg.	Purified Intrinsic Factor Concentrate	0.5 mg.	Manganese (as MnO_2)	1 mg.
Folic Acid	1 mg.	Iron (as $FeSO_4$)	10 mg.	Magnesium (as MgO)	1 mg.
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Both hands

It wasn't until I had begun practicing the specialty of gynecology and was safely in the sanctity of my own office that I had the temerity to deviate from the long established custom and attempt examination with my right hand. Immediately, it seemed as if a whole new horizon had unfolded itself before me and it enabled me to discern pathology which previously had been elusive to the fingers of my left hand. There was no comparison in the tactile accuracy for the right side of the pelvis but I noted at the same time that it was not quite so easy to feel the left side of the pelvis with the right hand. Therefore, I concluded that in cases of doubt it would be more prudent to utilize both hands since there are few who will not agree that it it easier to feel the left side of the pelvis with the left hand and the right side of the pelvis with the right hand and it is, therefore, more rational and accurate to employ both. *Charles B. Marek, M.D. Pelvic Examination — What Price Hand? Maryland M.J. Oct.* 1955.

Anemia and CA of bowel

Toxemia or anemia or both are frequent accompaniments of large, ulcerating lesions of the right portion of the colon and may be the only symptoms. Why anemia should occur so frequently has occasioned much conjecture, and many theories have been advanced to explain it. The most plausible explanation seems to be that it results from a combination of absorption of noxious substances such as bacterial toxins and proteins with hemolytic properties and insidious but direct loss of blood from the ulcerated area. *Charles W. Mayo, M.D. and Donald R. Davis, M.D. Neoplasms of the Colon. Postgrad. Med. June* 1955.

‹ ›

Until such time as some means is discovered to prevent tuberculosis which is as effective as the vaccine for smallpox, the X-ray remains our main weapon in the fight against tuberculosis insofar as finding unsuspected case is concerned. G. C. Brink, M.D., Canad. J. Pub. Health, May, 1954.

Index to Volume 108

Issue	*Pages*	*Issue*	*Pages*
July	1-94	October	213-256
August	95-166	November	257-314
September	167-212	December	315-368

This Index is Arranged Under the Following Headings: AUTHORS, CORRESPONDENCE, DEATHS, EDITORIALS, HOUSE OF DELEGATES, MEDICAL ECONOMICS, NEWS OF THE STATE, ORIGINAL ARTICLES

Authors

B

Baker, Wm. J., 238
Baran, Charles, 117
Binder, Morris, 321
Bledsoe, Alene, 220
Boshes, Louis D., 190

C

Colangelo, C., 223
Cummings, John R., 120

D

Derlacki, Eugene L., 1
Doswald, A. M., 278
Drennan, George L., 325
Drever, R. J., 117

F

Feinberg, Alan R., 5
Feinberg, Samuel M., 5
Feldman, L., 341
Fogelson, Samuel J., 182
Francis, Thomas, Jr., 257

G

Gillespie, James B., 327
Goldberg, Edwin E., 341

H

Hirsch, Edwin F., 128, 192, 238, 287, 345

I

Irons, Ernest E., 107

J

Jung, Frederic T., 355

K

Krause, Arlington C., 337
Kulis, John C., 280
Kulwin, Myron H., 179
Kurth, M. E., 117

L

Lackenbacher, Rudolph S., 14
Lewin, Philip, 190
Lichtenstein, M. R., 101

M

Mack, J. Keller, 185
Maxwell, Charles L., 269

N

Necheles, H., 275
Nechtow, Mitchel J., 278
Norbury, F. Garm, 226

O

Ochsner, Alton, 213

P

Paddock, Richard, 167
Pfister, Charles W., 283
Portes, Caesar, 301

R

Raber, Paul A., 171
Reich, Walter J., 278
Roth, Russell B., 261
Rothman, Stephen, 10
Rubenstein, M. William, 278
Rudman, Irving, 120, 175

S

Samet, Eli T., 182
Samuels, Thomas W., 236
Saphir, William, 280
Sbertoli, Maurice W., 321
Scannell, Margaret, 177
Schmitz, Herbert E., 177
Schulman, Leonard M., 218
Seagle, J. B., 231
Shair, Hilliard M., 228
Shrifter, Harold B., 341
Silverman, Frederic N., 95
Smith, Harold E., 273
Stenn, Frederick, 112, 113
Stern, Kurt, 315

T

Tatarowicz, B. J., 283
Thompson, Edward M., 330

W

Weyl, Ruth, 265
Winter, Irwin C., 334
Wolff, John R., 246
Wright, Glenn E., 286

Correspondence

Academy of Psychosomatic Medicine 201
Allergy, Officers of the Chicago Society of 205
A.M.A. Official Tour to Nassau 305
A.M.A. Sponsoring Three Regional Medical-Legal Conferences 202
American Congress of Physical Medicine and Rehabilitation, The 134
American Dermatological Association Annual Prize Essay Contest 203
American Goiter Association 306
Announcement of the Van Meter Prize Award 203
Annual Session of Illinois Chapter, Academy of General Practice 251
Army to Pay Higher Entrance Rates to Civilian Physicians 204
Atomic Warfare, Military Surgeons to Discuss Medical Aspects of 201
Blue Cross Increases Benefits and Membership Dues 305
Cancer Lecture Series 250
Cerebral Palsy Officers, American Academy for ..361
Chest Physicians Essay Contest 306
Child Psychiatry, Officers of Chicago Council of ..362
Clinics for Crippled Children Listed for—
August 22
September 134
October 200
November 250
December 307
January 360
Draft, New Changes and Procedures in the Doctor 200
Exhibit on Uterine Cancer Test Available 203
Financial Aid for Student Nurses 202
Fiske Fund Prize Dissertation, 1955 252
Hektoen Institute Awards 136
He Was There 133
Hospitals to be Published Twice Monthly 205
I.A.G.P. Postgraduate Program 205
Illinois Association of Medical Health Officers 22
Industrial Health P.G. Courses 251
Industrial Medicine, Fellowships in 306
Intestinal Research Institute 361
Medical Reservists to Earn Credit Points at Military Surgeons Meeting 252
Mississippi Valley Medical Society Meeting 136
Nuclear Medicine, Central Society of 362
Northwestern University Medical School in Radiation Physics 361
Northwestern University Medical School, New Appointments at 135
Obstetrics and Gynecology, American Board of ..361
Occupational Skin Problems, Instruction in 135
Officers of Illinois Medical Service Blue-Shield Plan 135
Ophthalmology and Otolaryngology, Midwinter Seminar in 360
Ophthalmology Journal, New 205
Pan American Medical Women's Alliance, Notice of V Congress of 361
Plastic Surgery of the Head and Neck, Second Graduate Course in 205
Physical Therapy Examination 307
Postgraduate Assembly of the Endocrine Society .133
Postgraduate Courses on Diseases of the Chest 136
Postgraduate Gastroenterology, Course in 135
Psychiatric Lecture Series for all Physicians 133
Rheumatic Diseases, Midwest Conference on 204
University of Michigan Medical School Postgraduate Conference 251

Deaths

Allen, Harvey S. 27
Albus, William Reuben 313
Auld, Frank Parkinson 313
Backer, Meyer 27
Berry, Frederick A. 367
Beschloss, Ottokar 140
Birmingham, Eugene E. 140
Birnbaum, Richard 27
Blaufuss, Armin L. 313
Boulton, Stanton S. 27
Bowser, Harold Curtis 313
Breakstone, Edgar O. 367
Burkhart, Victor H. 212
Cain, Cornelius R. 140
Carley, Paul Sterling 27
Castro, Parley Carper 140
Chittum, Jason D. 27
Cottrell, Thomas 27
Danielson, Wilford Aldrich 256
Davies, Raymond E. 27
Davidson, Herman P. 367
Deardorff, Frank Benson 212
Dent, John Harris 140
Deuterman, Joel L. 212, 313
Dickinson, Harry Barham 212
Dicus, George A. 27
Doerann, August Frederick 212
Donovan, Roscoe P. 313
Donovan, William P. 140
Edwards, Robert W. 256
Firfer, Bourke 367
Fitz, Frederick W. 313
Foster, Thomas J. 367
Frankenstein, Victor S. 140
Fuller, R. C. 27
Gaebler, Arthur 140
Gaff, John Henry 256
Gilborne, Henry B. 313
Glatter, Zoltan 212
Goldfine, Manuel 140
Greaves, Horatio Norman 313
Hambrecht, Frederick E. 140
Hastings, James Barnard 212
Haynes, Halbert A. 140
Henry, James Clayton 212
Hess, Julius H. 367
Hill, George Ray 256

Hines, Laurence E. 27
Hougland, Walter Louveria 367
Johnson, George Frederick 256
Kelly, Blair 313
Kelly, Raymond M. 212
Khamis, Joseph Abraham 313
King, Walter W. 27
Klaptoz, Adalbert 313
Klawans, Eugenia A. 368
Kramer, Gabriel B. 140
Lambert, Joseph S. 313
Leininger, Elmer C. 212
Lenz, Joseph A. 27
Lester, Harry S. 140
Levinson, Abraham 313
Leviton, Nathan David 313
Long, James U. 368
Lutton, Ethelbert A. 313
Maha, Frank J. 368
McCradie, Andrew R. 313
McCarthy, Ralph Rowland 368
McDonald, William Brown 256
Mendelsohn, Jacob J. 212
Miller, John Estill 27
Mitchell, William J. 212
Munson, Louis M. 140
Nassar, Naif E. 256
Noe, Philip R. 313
Opitz, John H. 368
Parker, James William 313
Parsons, Frederick H. B. 27
Perry, Benjamin 368
Perusse, George L. 212
Peterson, Carl Melancton 313
Pike, Charles H. 313
Poniatowski, Jerome Francis 140
Prescott, Harry V. 256
Puris, Abram Martin 212
Roberts, John Charles 256
Rosenberg, Harry 313
Rosenberg, William A. 368
Rosenblate, Adolph J. 368
Roth, Henry H. 27
Samuel, Jacob 313
Schiller, Alfred A. 27
Schipfer, Lloyd Albert 368
Senturia, Ben Druze 256
Shabat, Louis Willard 368
Sharkey, Mary Ellen 256
Sheerer, Walter Winfield 140
Shurtz, Richard Charles 313
Souders, John C. 313
Speed, Kellogg 140
Theobald, John J. 140
Vanatta, Clyde L. 140
Van Valkenburg, John Leroy 27
Vertuno, Louis Abbott 368
Waldman, Joseph Sterling 27
Weiner, Samuel Isaac 314
Weiss, Emil 27
Welch, Gilford N. 314
Westervelt, J. C. 368
White, James R. 212
Wiener, Samuel H. 140
Winn, John P. 27
Worden, George Kent 140

Editorials

Alien Physicians Studying in the United States ..243
A.M.A. Annual Meeting, The 19
A.M.A. Study Conference 349
Book Reviews, July 52a, Aug. 42a, Oct. 58a, Nov. 74a, Dec. 42a
Clinical Meeting of the A.M.A. 300
Compensating the Faculties of Medicine 353
Conference of Mental Health Representatives 242
Creative Protein 348
Deductible Medical Expenses, New Ruling Tells What Are and What Are Not 198
Doctor-Hospital Relationships 354
Do You Plan to Build—Remodel—or Rent? 294
Drugs in Epilepsy 241
Education Versus Service 16
Governor Vetoes Proposed Revision (Senate Bill 247) of the Coroners Act of 1874 351
Graff, M.D. Received Citizens Award, Richard J. .354
Gynecology, A Century of 241
History of Medical Practice in Illinois, The 199
History, Interest in Medical 242
Hospitals to the Nation, Importance of Small 196
Indigent Care Plans, Booklet on 299
Interstate Postgraduate Medical Association 241
Pathologic Diagnostic Service 349
Physician Population, The Nations 197
Pictorial Report on the 1955 Annual Meeting 123
Poliomyelitis Vaccine, The Illinois Plan for the Distribution of 295
Polio Lesson, The 121
Postage Stamps, Medicine on 354
Postgraduate Conferences in Illinois 297
Public Relations in Illinois, Early Medical 299
Report on Your 1955 Annual Meeting 18
Rheumatic Fever, Prevention of 294
Section Officers for 1956 Annual Meeting 122
Statutes of Public Health Significance Enacted by 69th General Assembly 243
Telford "G.P." of Year, Dr. 293
Telford, New Honors for Dr. 350
Thyroid Cancer in Childhood 196
Traffic Safety 21
Urogenital Cancer in Children 293
"Volume 11" 20
Washington, The Month in 34a
Woman's Auxiliary, The 298
Wonder Drugs, The 121
Your President-Elect 18

House of Delegates

First Session 28
Second Session 141
Third Session 150

Medical Economics

Insurance for Freedom in Education, (Wolf) 246
Public Relations, (Portes) 301
Purposeful Living, (Hirsch) 128
Some Economic Aspects of Health Resorts, (Jung) 355

News of the State

Coming Meetings, Personals 23, 137, 208, 252, 308, 363

Original Articles

Abortions, Missed, (Smith) 273
Abortion, The Treatment of Threatened, (Paddock) 167
Acute Intestinal Obstruction, (Rudman) 175
Accident Prevention in Childhood, (Gillespie) 327
Alcohol Inhalation in the Treatment of Acute Pulmonary Edema in the Immediate Postoperative Period, (Weyl) 265
Allergy, The Otolaryngologist Looks at, (Derlacki) 1
Allergy, Gastro-Intestinal, (Seagle) 231
Allergy, Useful Drugs in the Treatment of, (Feinberg & Feinberg) 3
Aneurysm of the Splenic Artery, (Colangelo) 223
Cardiac Arrhythmias, Their Prognostic Significance in Recent Myocardial Infarction, (Binder & Sbertoli) 321
Cat Scratch Disease, (Case Report), (Rudman & Cummings) 120
Chronic Gastro-Intestinal Hemorrhage, Diagnostic Enigma, (Case Report), (Pfister & Tatarowicz) .283
Collateral Cardiac Circulation, (Bledsoe) 220
Dermatoses, Oral and Injectible Chlorprophenpyridiamine, Maleate (Chlor-Trimeton Maleate) in the Treatment of Pruritic, (Lackenbacher) 14
Gastro-Intestinal Tract, (Seminar), Newer Concepts of Diseases of the, (Necheles) 275
Guthrie, Samuel, (1782-1848) Physician, Inventor, Chemist, Farmer, (Frederick Stenn) 113
Guthrie Stone, The, (Stenn) 112
Herpes Zoster, Uncommon Sites of, (Norbury) ..226
Keratinization Process, (Seminar) Physiology and Biochemistry of the, (Rotherman) 10
Massive Inversion of the T Wave (Cook County Hospital Case Records), (Goldberg, Shifter & Feldman) 341
Medicine and Citizenship, (Irons) 107
Organized Public Health with Particular Emphasis on Relationships, The Approach of, (Thompson) 330
New Members to Work, Putting, (Roth) 261
Panel on School Health and the Family Physician .325
Pericardial Tamponade Due to Tuberculous Pericarditis, (Cook County Case Record), (Kulis & Saphir) 280
Poliomyelitis, The Practicing Physicians Role in the Control of, (Schulman) 218
Power Lawn Mower Decortication of Scalp and Skull, (Case Report) (Kurth, Drever & Baran) .117
Pulmonary Tuberculosis, Modern Management of, (Lichtenstein) 101
Pyodermas, Management of the, (Shair) 228
Retrolental Fibroplasia Problem, The Extent and Depth of the, (Krause) 337
Role of the Physician in the Parmaceutical Industry, (Seminar), The, (Winter) 334
Health of School Children, (Drennan) 325
Sigmoid-Volvulus, An Unusual Complication of, (Samuels) 236
Situs Inversus Viscerum (Case Report), (Wright) .286
Thermonuclear Fall-Out Problem in the State of Illinois, (Maxwell) 269
Toxemia of Pregnancy, Veratrum Derivatives in the Treatment of, (Raber) 171
Transfusion Therapy-Progress and Problems, 1. Clinical Aspects, (Stern) 315
Trichomonas Vaginitis, Diagnosis and Treatment with Milibis, (Reich, Nechtow, Rubenstein & Doswell) 278
Venous Thrombosis, (Ochsner) 213
Virus Problems in Medicine, (Francis) 257
X-Ray Diagnosis in Pediatrics, (Silverman) 95

Pathology Conferences

Embolic Infarcts of the Brain and Other Viscera with Chronic Rheumatic Endocarditis, and
Acute Thrombo-Ulcerative Endocarditis of the Mitral Valve, (Hirsch) 287
Congenital Stenosis of the Neck of the Urinary Bladder, (Baker & Hirsch) 238
Friedrich's Ataxia Complicated by Chronic Fibroplastic Myocarditis, and
Peptic Ulcer of the Stomach and Sudden, Perforation of a, (Hirsch) 345
Thrombosis of the Basilar Artery, and
Aneurysmal Hemangiectasis (Hemangioma) of The Cerebrum, (Hirsch) 192

The P.R. Page

Sept. 206
Oct. 248
Nov. 303
Dec. 358

2,704